

Part 99 Security Control of Air Traffic

This edition replaces the existing loose-leaf
Part 99 and its changes.

This FAA publication of the basic Part 99, effective September 30, 1963,
incorporates Amendments 99-1 through 99-16 with preambles.

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PART 99

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its regulatory material into a new series of regulations called the Federal Aviation Regulations to replace the present "Civil Air Regulations" and "Regulations of the Administrator".

During the life of the recodification project, Chapter I of Title 14 may contain more than one Part bearing the same number. To differentiate between the two, the recodified Parts, such as the ones in this subchapter, will be labeled "[New]". The label will of course be dropped at the completion of the project as all of the regulations will be new.

This action was published as a notice of proposed rulemaking in the Federal Register on February 1, 1963 (28 FR 1003), and as Draft Release 63-3.

Some of the comments received recommended specific substantive changes to the regulations. Although some of the recommendations might, upon further study, appear to be meritorious, they cannot be adopted as a part of the recodification program. The purpose of the program is simply to streamline and clarify present regulatory language and to delete obsolete or redundant provisions. To attempt substantive changes in the recodification of these regulations (other than minor, relaxatory ones that are completely noncontroversial) would delay the project and would be contrary to the ground rules specified for it in the Federal Register on November 15, 1961 (26 FR 10698) and Draft Release 61-25. However, all comments of this nature will be preserved and considered in any later substantive revision of the affected Parts.

As a result of other comments received, several changes have been made in Subchapter F.

Sections 91.33 and 91.35 have been added to include the instrument and equipment requirements for general aviation aircraft that were contained in Part 43. Section 91.33 incorporates the instrument and equipment requirements for standard category aircraft from former §43.30 and the DME provisions from former §43.33. Section 91.35 incorporates the flight recorder requirements from former §43.32. These changes have been made in recognition of the greater user convenience that results from combining these rules with the general operation provisions of Part 91 [New].

A new §91.37 has been included in Part 91 [New] to cover weight limitations for transport category aircraft. This section is based upon former §§43.11, and 43T.11 of SR 422A and SR 422R. These provisions were omitted from DR 63-3 as surplus, but comments correctly pointed out the need for their inclusion in Part 91 [New].

Section 91.59 as proposed in DR 63-3 required compliance with the applicable marine rules of the road when operating an aircraft on water but it did not specifically spell out those rules. In order to avoid any misunderstanding as to the rules that must be complied with, that section has been revised to state those rules in detail and it now appears as §91.69.

A number of changes have been made in proposed §91.75. As proposed in DR 63-3 that section contained the air traffic rules for operating on or in the vicinity of airports, including specific provisions for controlled and uncontrolled airports. Because of the undue length of the section it has been broken down into three separate sections which now appear as §§91.85, 91.87, and 91.89. Paragraph (a) of proposed §91.75 defined, for the purpose of that section, the terms "airport traffic area," "controlled airport," and "uncontrolled airport". The latter two terms were distinguished on the basis of whether or not the airport had a control tower. One comment received pointed out that under the present rules even an airport without a control tower becomes a "controlled airport" if it is located in a control zone and the weather in that zone goes below basic VFR minimums. Therefore, §§91.87 and 91.89 have been revised to eliminate those terms and to execute their definitions. In addition, because of its general applicability, the definition of "airport traffic area" has been transferred to Part 1 [New].

Two other changes have been made in proposed §91.75. First, the word "arriving" has been inserted in the first sentence of paragraph (c) of §91.85 so that it correctly reflects the scope of the rule on which it is based. Secondly, paragraph (d) of §91.87 has been revised to apply only to aircraft "operating to" an airport. As this provision appeared in the draft release it would apply to aircraft operating "to, from, or on" an airport. While this language properly reflected the applicability of former §60.18(b), one comment pointed out its incorrect applicability and this opportunity is being taken to correct it.

of the revised subchapter. Amendments 43-16, 43-17, 48-1, 60-31, 60-32, and 619-1 are therefore reflected in the new subchapter.

Other minor changes of a technical clarifying nature or relaxatory nature have been made. They are not substantive and do not impose any burden on regulated persons.

Of the comments received on Draft Release 63-3, several suggested changes in style, format, or technical wording. These comments have been carefully considered and, where consistent with the style, format, and terminology of the recodification project, were adopted.

Comments received regarding proposed §91.77 indicated a misunderstanding of the provisions of that section. Under §60.24, on which proposed §91.77 was based, there were two types of flight test areas, "approved" areas and "designated" areas. Since the Administrator has never "designated" flight test areas, §60.24(a)(2) has been dropped as obsolete. The remaining flight test area provisions are now included in §91.93.

A number of comments received regarding proposed §91.35 indicated that many persons were not aware that under Part 190 of the Civil Air Regulations a person operating a foreign civil aircraft in the United States under VFR rules had to file a VFR flight plan. As proposed, §91.35 simply restated that provision and it has been retained without change in §91.43.

It should be noted that CAMs and information notes that are still current but which have been deleted as part of this amendment, will be republished in the Agency's Advisory Circular System.

The recodification of the air traffic and general operating rules in Subchapter F does not change the applicability of those rules, nor does it affect those rules governing special operations that prevail over the general rules contained in that subchapter. In addition, a certificate of waiver or an exemption that involves a regulation recodified herein that is outstanding on the effective date of this amendment will continue to be effective according to its terms and conditions even though it refers to Part or section numbers no longer in existence. For example, an exemption from the VFR cruising altitude provisions of former §60.32 would continue under the terms and conditions of that exemption, to allow deviation from those altitudes, even though §60.32 has been superseded by §91.109. At such time as a certificate of waiver or an exemption is renewed, section references will be revised to reflect the new section number. In view of this, it is not necessary for persons who hold certificates of waiver or exemptions to take any action due to the recodification and renumbering of the air traffic and general operating rules.

The definitions, abbreviations, and rules of construction contained in Part 1 [New] of the Federal Aviation Regulations apply to Subchapter F. When Part 1 [New] was adopted its preamble stated that it would be amended as necessary in order to apply to specific regulations as they were recodified. As part of this action Part 1 [New] is being amended to incorporate definitions found to be necessary because of the adoption of subsequently issued FARs, including Subchapter F. The definitions of "air traffic clearance," "air traffic control," and "airport traffic area" have been incorporated from Part 60. The definitions of "kite" and "rocket" have been incorporated from Part 48. The definitions of "air commerce," and "foreign air commerce," "interstate air commerce," and "overseas air commerce" have been incorporated from §101 of the Federal Aviation Act of 1958. In addition to these definitions, Part 1 [New] is being amended to include definitions of "category," "class," "type" and to delete the definition of "pilot".

Interested persons have been afforded an opportunity to participate in the making of this regulation, and due consideration has been given to all relevant matter presented. The Agency appreciates the cooperative spirit in which the public's comments were submitted.

In consideration of the foregoing Chapters I and III of Title 14 of the Code of Federal Regulations are amended, effective September 30, 1963.

(Published in 29 FR 7146, June 2, 1964)

This amendment of Part 99 [New] of the Federal Aviation Regulations establishes an Air Defense Identification Zone over the Panama Canal Zone to require position reports and flight plans from pilots operating civil aircraft into or within the ADIZ.

The airspace above the Canal Zone is currently designated as the "Canal Zone Military Airspace Reservation" by § 5.2 of the Panama Canal Air Navigation Regulations, 35 CFR 5.2. This section and the associated Air Navigation Regulations of Part 5 of Title 35 are promulgated by the Secretary of the Army under authority delegated by the President in accordance with the Canal Zone Code, Section 701, 76A Stat. 29, 700. This authority was reserved to the President by Section 101 (29) of the Federal Aviation Act, 49 U.S.C. 1301.

The Military Airspace Reservation extends from the surface of the Canal Zone upward without ceiling. Transient aircraft may not be operated within the Reservation without the permission of the Commander in Chief, U.S. Southern Command. In addition to the Reservation, which is charted as R-600, there are numerous danger areas designated over the Canal and the waters at each end of the Canal, both within and outside the 3-mile marine boundary. The effect of the Airspace Reservation is to prevent the operation into or through the Zone of all aircraft except U.S. military aircraft and aircraft of certain duly organized civil air clubs. Landings of other aircraft are permitted if an emergency exists.

Discussions between representatives of the Department of Defense and this Agency have resulted in the formation of a plan to improve the flow of air traffic in the regional area which encompasses the Canal Zone. This plan provides for the installation and operation of a VORTAC and a high-power, low-frequency radio beacon at each end of the Zone; an airport surveillance radar, and a long range radar; the modification of the airspace restrictions over the Zone and the adjacent oceanic areas; revision of the air route structure; and the establishment of this Air Defense Identification Zone with associated facilities.

The ADIZ established herein extends upward from 2,500 feet MSL. Concurrently with the effective date of this amendment, military action will reduce R-600 by the imposition of a ceiling at 2,500 feet above mean sea level. At the same time, the danger areas over the Canal, including those within the 3-mile limit, will be re-established by the military as "restricted areas" or rescinded as being no longer necessary. It might be noted that these restricted areas are not being established by this Agency in Part 73 [New] of the Federal Aviation Regulations and, consequently, do not fall within the definition of that term as used in the Federal Aviation Regulations. All restricted areas will be designated joint-use airspace with the Panama Air Route Traffic Control Center acting as the controlling agency. The danger areas existing beyond the 3-mile limit will be modified and renamed in non-rulemaking actions by this Agency as warning areas.

Inasmuch as the overall effect of these regulatory actions will lessen a burden on the public, I find it contrary to the public interest to comply with the notice and public procedure requirements of the Administrative Procedure Act. Compliance with the effective date provision of the Act will be met in that this amendment is made effective July 1, 1964.

In consideration of the foregoing, Part 99 [New] of the Federal Aviation Regulations is hereby amended as follows.

This amendment shall become effective at 0001 EST (0501Z) on July 1, 1964. (Sections 307, 1201, 1202 of the Federal Aviation Act of 1958, 72 Stat. 749, 800, 49 U.S.C. 1348, 1510, 1522.)

In Notice 64-8, the FAA proposed a partial realignment of the Alaskan DEWIZ in order to reduce the frequency of flight progress reports. Since overwater pilots are required to report each five degrees, latitude or longitude, ending in either zero or five, it was proposed to adjust portions of the southern and western boundaries of the DEWIZ to coordinates compatible with these overwater reporting points.

Interested persons were afforded an opportunity to participate in the rulemaking through submission of comments. Due consideration was given to all relevant matter presented.

Only two comments were received on the proposed rule. The Air Line Pilots Association recommended adoption of the proposal. The Air Transport Association of America (ATA) had no basic objection to the proposal, but felt that further changes to the DEWIZ boundary would be appropriate. The ATA pointed out that procedures for the Anchorage Oceanic Control Area call for pilots operating aircraft on a track predominantly east or west to report each ten degrees of longitude, rather than each five degrees, if the speed of the aircraft is such that ten degrees will be traversed in one hour and twenty minutes or less. Accordingly, they suggested alignment of the western boundary of the DEWIZ to coincide with 170° or 180° W longitude, instead of with 175° W longitude as was proposed in the Notice.

The FAA recognizes that alteration of the western boundary of the DEWIZ as suggested by the ATA would further reduce jet aircraft position reporting. However, relocation of the boundary to either 170° or 180° W longitude would not be practicable. Use of 170° W longitude would compromise the capability to correlate the identification, location, and control of civil aircraft because of the proximity of the boundary to the mainland. On the other hand, use of 180° W longitude would create a severe problem in correlating position reports because of the inadequacy of navigational aids in that area. Therefore, action is taken herein to alter the DEWIZ as proposed in Notice 64-8.

Since this action involves airspace outside the United States, the Agency has consulted with the Secretary of State and the Secretary of Defense in accordance with the provisions of Executive Order 10854.

In consideration of the foregoing, Section 99.47 [New] of Chapter I of Title 14 of the Code of Federal Regulations is amended, effective August 20, 1964.

This amendment is made under the authority of Sections 307, 1110, and 1202 of the Federal Aviation Act of 1958 (49 U.S.C. 1348, 1510, and 1522), and Executive Order 10854, 24 FR 9565.

Amendment 99-3

Special Requirements—Panama Canal ADIZ

Adopted: August 5, 1964

Effective: August 10, 1964

(Published in 29 FR 11446, August 8, 1964)

On July 1, 1964, Part 99 of the Federal Aviation Regulations was amended to establish an Air Defense Identification Zone over the Panama Canal Zone to require position reports and flight plans from pilots operating civil aircraft into or within the ADIZ. Under the ADIZ concept, the airspace under 2,500 feet would continue as a military airspace restricted area and there would be numerous danger areas designated over the Canal and waters at each end of the Canal.

Instrument flight rule flights within the ADIZ are subject to the routes and reporting points prescribed for the Panama control area. The clearances associated with IFR operations provide for route navigation as well as radar navigation within the ADIZ, thus assuring the specific positioning of aircraft in the airspace overlying the Zone.

a new section after section 99.31, effective at 0001 EST (0501Z) on August 10, 1964.

This amendment is made under the authority of sections 307, 1201, and 1202 of the Federal Aviation Act of 1958 (49 U.S.C. 1348, 1510, and 1522).

Amendment 99-4

Alteration of Alaskan Distant Early Warning Identification Zone

Adopted: April 29, 1965

Effective: May 27, 1965

(Published in 30 FR 6242, May 5, 1965)

The purpose of this amendment to Part 99 of the Federal Aviation Regulations is to alter the eastern and southeastern boundaries of the Alaskan Distant Early Warning Identification Zone (DEWIZ), thereby reducing requirements for flight-progress reporting and estimating in that area.

As presently designated, the southeastern boundary of the Alaskan DEWIZ crosses overwater Control Area Extension 1310 in the vicinity of Domestic Gustavus, a low altitude reporting point located at 56°57'N, 139°26'W. Domestic Yakutat, a low altitude and high altitude reporting point, is located on Control 1310, 91 nautical miles to the west at 57°52'N, 141°46'W.

High altitude flights proceeding in a westerly direction along Control 1310 are now required to furnish an estimated time for penetration of the DEWIZ near Domestic Gustavus, and to report passing Domestic Yakutat shortly after penetration.

Flight planning and air traffic control procedures are simplified and communications reduced where DEWIZ or ADIZ penetration points and reporting points coincide.

It is the purpose of this amendment to realign the southeastern boundary of the Alaskan DEWIZ so that it passes through Domestic Yakutat, thus effecting that simplification.

Since this action involves airspace outside the United States, the Agency has consulted with the Secretary of State and the Secretary of Defense, in accordance with the provisions of Executive Order 10854.

Inasmuch as this amendment relates to defense requirements, and in the interest of early alteration of aeronautical charts, I find it contrary to the public interest to comply with notice, public procedure, and effective date requirements of the Administrative Procedure Act, and this amendment may be made effective in less than 30 days.

In consideration of the foregoing, Section 99.47 of Part 99 is amended, effective May 27, 1965.

This amendment is made under the authority of Sections 307, 1110, and 1202 of the Federal Aviation Act of 1958 (49 U.S.C. 1348, 1510, and 1522), and Executive Order 10854 (24 FR 9565).

99.7 of Part 99 of the Federal Aviation Regulations that would clarify the extent to which the Administrator intends implementing his authority, under the Federal Aviation Act of 1958, to encourage and permit the maximum use of the navigable airspace by civil aircraft consistent with the national security.

Interested persons were afforded an opportunity to participate in the proposed rulemaking through the submission of comments. Due consideration was given to all relevant matter presented.

Although all comments generally supported the proposed amendments, the Air Transport Association of America (ATA) stated that it was concerned with the broadness of the authority granted the Administrator by the proposal to amend § 99.7. The amendment, as proposed, does not grant the Administrator any degree of authority. Rather, it implements the authority granted him by § 1202 of the Federal Aviation Act of 1958.

The purpose of the amendment, herein, is to make perfectly clear that special security instructions can and may be issued in accordance with § 1202 under any situation determined to be detrimental to the interests of national defense, including all degrees of hostile actions as well as situations precipitating the declaration of an Air Defense Emergency or Defense Emergency and attendant full war plans.

The ATA also commented that the words “. . . in the interest of national security,” as used in the proposed change to Section 99.7, are not defined and, as such, are susceptible to different interpretations. Further, it was suggested that the language would be more in keeping with the intent of the amendment, as expressed in the preamble of the notice, if the words “. . . hostile actions threatening national security,” were used. In the interest of national security, the Administrator may issue special security instructions under conditions which include all degrees of hostility, ranging from threats to actual attack. The phrase “in the interest of national security” is not specifically defined since it is an inclusive term intended to cover any and all situations that quite obviously cannot be predetermined.

The Aircraft Owners and Pilots Association recommended that the terms “Air Defense Emergency” and “Defense Emergency” continue as conditions for the issuance of special security instructions. The basis for this recommendation was that the Administrator has sufficient authority under the Federal Aviation Act of 1958 to issue special security instructions as necessary, and in the event of a time-critical situation, military commanders would not wait for a formal declaration of an Air Defense Emergency or Defense Emergency prior to initiating defensive measures. Again, the amendment of § 99.7 is designed to clarify the extent to which the Administrator intended using his authority under § 1202 of the Act, rather than attempting to add to that authority. Further, the argument that military commanders would not wait for a formal declaration of an Air Defense Emergency or Defense Emergency strengthens, rather than contravenes, the position that such a declaration should not be a prerequisite for the issuance of, and compliance with, special security instructions.

Finally, AOPA stated that it realized situations may arise that do not require the declaration of an Air Defense Emergency or Defense Emergency, or hostile actions may occur without sufficient time to make these declarations, but that the issuance of Special Rules would be sufficient to cope with these situations; that it would be impractical to cover such exceptions to a formal declaration in Part 99. Unfortunately, immediate compliance with defense measures, including special security instructions, to counter threatening hostile actions may be required at any given moment, and does not lend itself even to the publication of Special Regulations. In view of such uncertainty, the language proposed for § 99.7 provides an exceptionally practical and necessarily flexible means, consistent with appropriate agreements between the Federal Aviation Agency and the Department of Defense, for dealing with situations involving all activities determined to be detrimental to national security. To clarify further the extent to which the Administrator intends issuing special security instructions under the authority of § 1202, specific reference to such appropriate agreements between the Agency and the Department of Defense is hereby inserted in § 99.7 as proposed.

In consideration of the foregoing, §§ 99.3 and 99.7 of Part 99 of the Federal Aviation Regulations are amended, effective August 27, 1965, as hereinafter set forth.

The purpose of this amendment to Part 99 of the Federal Aviation Regulations is to alter the description of the western boundary of the Alaskan Distant Early Warning Identification Zone (DEWIZ), thereby reducing requirements for flight-progress reporting and estimating in that area.

Oceanic position reporting procedures in the Anchorage control area require aircraft to make position reports when passing each five or ten degrees of longitude extending east and west of the 180-degree meridian.

High-performance flights are required to report only every ten degrees of longitude.

The western boundary of the Alaskan DEWIZ is presently located at 175 degrees west longitude. Pilots of aircraft planning to penetrate this DEWIZ must file a flight plan containing the estimated point and time of penetration. For high-speed aircraft, this is an extra estimate that is not needed for air traffic control (ATC) purposes.

Flight planning and air traffic control procedures are simplified and communications reduced where DEWIZ or ADIZ penetration points and reporting points coincide. Therefore this rule relocates the western boundary of the Alaskan DEWIZ from its present position at 175 degrees west longitude to the 180-degree meridian.

Since this action involves airspace outside the United States, the Agency has consulted with the Secretary of State and the Secretary of Defense, in accordance with the provisions of Executive Order 10854.

Inasmuch as this amendment relates to defense requirements, I find it contrary to the public interest to comply with the notice and public procedure requirements of the Administrative Procedure Act.

This amendment is made under the authority of sections 307, 1110, and 1202 of the Federal Aviation Act of 1958 (49 U.S.C. 1348, 1510, and 1522), and Executive Order 10854 (24 FR 9565).

Amendment 99-7

Alteration of Atlantic Coastal Air Defense Identification Zone

Adopted: May 22, 1968

Effective: July 25, 1968

(Published in 33 FR 7881, May 30, 1968)

The purpose of this amendment to Part 99 of the Federal Aviation Regulations is to alter the description of the Atlantic Coastal Air Defense Identification Zone (ACADIZ) in the vicinity of the South Island Intersection so that aircraft being radar vectored from the vicinity of South Island to Coyle are able to stay to the west of the ACADIZ avoiding the need for coordination with Air Defense Command Facilities.

In a separate rule making action to improve the efficiency of the air traffic control system in the ACADIZ boundary area, the following changes to off-shore routes southeast of New York City have been effected:

1. Extension of Jet Route 63 from the Kennedy, NY VORTAC to the Tuna (over-water) intersection.
2. Designation of a new jet route between Sea Isle, NJ VORTAC and the Shad (over-water) intersection.
3. Modification of Control 1147 and 1148.
4. Modification of Wrightstown, NJ, Transition Area.
5. Designation of additional high and low altitude reporting points.

Amendment 99-8

Alteration of Atlantic Coastal Air Defense Identification Zone

Adopted: January 14, 1969

Effective: March 6, 1969

(Published in 34 FR 923, January 22, 1969)

The purpose of this amendment to Part 99 of the Federal Aviation Regulations is to alter the description of the boundary of the Atlantic Coastal Air Defense Identification Zone (ACADIZ) to permit the designation of a new transition area to facilitate the radar vectoring of departures from Kennedy International Airport to overseas destinations.

A requirement exists for additional controlled airspace within Warning Areas W-105 and W-106 to permit radar vectoring of JFK departures en route to overseas destinations. This amendment is a required ancillary action to accommodate this proposed Transition Area.

The matter of changing the ACADIZ boundary has been coordinated with NORAD Headquarters, and will not adversely affect the NORAD mission.

Since the ACADIZ boundary change involves airspace outside of the United States, the FAA has consulted with the Secretary of State and the Secretary of Defense, in accordance with the provisions of Executive Order 10854.

This amendment is ancillary to an airspace rulemaking action (Docket No. 68-EA-14) which requires redefining the coordinates of the ACADIZ. Since this amendment relieves a burden on the public and is editorial in nature, I find it unnecessary to comply with the notice and public procedure requirements of 5 U.S.C. 553.

In consideration of the foregoing, Part 99 of the Federal Aviation Regulations is amended, effective March 6, 1969.

This amendment is made under the authority of Sections 307, 1110 and 1202 of the Federal Aviation Act of 1958 (49 U.S.C. 1348, 1510 and 1522) and Executive Order 10854 (24 FR 9565), and Section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

Amendment 99-9

Applicability; Gulf of Mexico Coastal ADIZ

Adopted: February 25, 1970

Effective: March 10, 1970

(Published in 35 FR 4292, March 10, 1970)

The purpose of these amendments to the Federal Aviation Regulations is to change the latitude for the applicability exception of Subpart A, Part 99, for aircraft operating in a Coastal or Domestic ADIZ with a true airspeed of less than 180 knots, and to revise the southern boundary of the Gulf of Mexico Coastal ADIZ.

Department of Defense air defense procedures have been amended so that all aircraft operating north of 25° north latitude or west of 85° west longitude at a true airspeed of less than 180 knots are classified as friendly. Since flight plans or ADIZ position reports are no longer needed for these aircraft, §99.1(b)(1) is amended to except those aircraft from the applicability of Subpart A, Part 99.

Inasmuch as this action involves airspace outside the United States, the agency has consulted with the Secretary of State and the Secretary of Defense in accordance with the provisions of Executive Order 10854.

In consideration of the foregoing, Part 99 of the Federal Aviation Regulations is amended, effective March 10, 1970.

This amendment is made under the authority of Sections 307, 1110 and 1202 of the Federal Aviation Act of 1958 (49 U.S.C. 1348, 1510 and 1522) and Executive Order 10854 (24 FR 9565), and Section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

Amendment 99-10

Deletion of Puerto Rico Coastal Air Defense Identification Zone

Adopted: February 27, 1976

Effective: March 11, 1976

(Published in 41 FR 10419, March 11, 1976)

The purpose of this amendment is to delete the airspace description of the Puerto Rico Coastal Air Defense Identification Zone (ADIZ) from § 99.45(f) of Part 99 of the Federal Aviation Regulations.

Part 99 designates defense areas, air defense identification zones, and prescribes rules for operating aircraft in those areas. The Puerto Rico ADIZ was designated in Part 620 of the Regulations of the Administrator at the request of the Department of Defense during a national emergency in 1962, and was rescinded, effective January 24, 1963 (28 FR 633), when that Department advised the Administrator that the situation which generated the requirement no longer existed. However, when Part 620 was recodified as Part 99 of the Federal Aviation Regulations, the airspace description of the Puerto Rico ADIZ was erroneously included. Since the ADIZ was rescinded and is no longer reflected on any charts, its description in Part 99 is no longer applicable, and is, therefore, deleted by this amendment.

The deletion of this airspace description, is editorial in nature and has no substantive effect. Therefore, notice and public procedure thereon are unnecessary, and, for the same reason, it may become effective in less than 30 days after publication in the Federal Register.

Authority: Sections 307, 1110 and 1202 of the Federal Aviation Act of 1958 (49 U.S.C. §§ 1348, 1510, 1522); Executive Order 10854 (24 FR 9505); and section 6(c) of the Department of Transportation Act (49 U.S.C. § 1655(c)).

In consideration of the foregoing, Part 99 of the Federal Aviation Regulations is amended, effective March 11, 1976, by deleting paragraph (f) of § 99.45.

Amendment 99-11

Revocation of Panama Canal Air Defense Identification Zone

Adopted: September 11, 1981

Effective: October 21, 1981

(Published in 46 FR 46569, September 21, 1981)

SUMMARY: This action removes from the Federal Aviation Regulations (FARs) all references to the Panama Canal Domestic Air Defense Identification Zone (ADIZ). The ADIZs are established to identify

the Chief Counsel, Attn: Rules Docket (AGC-204), Docket No. 22142, 800 Independence Avenue SW., Washington, DC 20591; or deliver comments in duplicate to: FAA Rules Docket, Room 916, 800 Independence Avenue SW., Washington, DC.

Comments may be examined in the Rules Docket, weekdays except Federal holidays, between 8:30 a.m. and 5:00 p.m.

FOR FURTHER INFORMATION CONTACT: William C. Davis, Air Traffic Rules Branch (AAT-223), Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; telephone (202) 426-3128.

SUPPLEMENTARY INFORMATION:

Comments Invited

Although this action is in the form of a final rule which involves airspace modifications which are dictated by international treaty, and, thus, was not preceded by notice and public procedure, comments are invited on the rule. When the comment period ends, the FAA will use the comments submitted together with other available information, to review the regulations. After the review, if the FAA finds that changes are appropriate, it will initiate rulemaking proceedings to amend the regulation. Comments that provide the factual basis supporting the views and suggestions presented are particularly helpful in evaluating the effects of the rule and determining whether additional rulemaking is needed.

Background

The Panama Canal Treaty, effective October 1, 1979, returned sovereign control of the United States Territory known as the Panama Canal Zone to the Republic of Panama. That transfer of control included sovereignty over the airspace above the former Canal Zone. Accordingly, the authority of the FAA to regulate that airspace ended on the date that the treaty became effective.

By letter received on May 28, 1980, the Chief, Aviation Program and Policy Division, United States Department of State, requested that the phrase "Panama Canal Zone" in the FARs be changed to "Republic of Panama." This action will eliminate entirely those FARs which reference the Panama Canal Zone.

The ADIZs were established to ensure that the Department of Defense could monitor and identify all aircraft entering United States airspace. Since the Panama Canal Zone is no longer sovereign airspace of the United States, the need and authority for surrounding it with a domestic ADIZ no longer exist. On April 10, 1980, the Republic of Panama established its own ADIZ around the former Canal Zone.

The United States Department of Defense has approved this cancellation of the Panama Canal Zone ADIZ.

Because the Panama Canal Treaty has already effectively invalidated the Panama Canal Zone ADIZ, this amendment merely alters the FARs to conform to a situation which already exists. I, therefore, find that advance notice and public procedure are unnecessary in this instance.

Adoption of the Amendment

Accordingly, Part 99 of the Federal Aviation Regulations (14 CFR Part 99) is amended, effective 0900 GMT, October 21, 1981.

(Secs. 307, 313(a), 1102, 1110, and 1202, Federal Aviation Act of 1958 (49 U.S.C. §§ 1348, 1354(a), 1502, 1510, and 1522)).

NOTE.—This action merely alters the Federal Aviation Regulations to conform to rules and procedures previously established by international agreement. The FAA has thus determined that this action—(1) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (2) does not warrant preparation of a regulatory evaluation as the anticipated impact

SUMMARY: This amendment to Part 99 of the Federal Aviation Regulations (1) modifies the geographic area of exclusion in which aircraft operating at a true airspeed of less than 180 knots would not need to meet the flight plan filing and other requirements of that Part, and (2) requires the aircraft's transponder capability to be included in the flight plan. The amendment responds to a threat to safety in air commerce by aircraft operating illegally with respect to transportation of drugs through airspace adjacent to the State of Florida.

Comments are invited on this amendment until April 30, 1982.

ADDRESS: Send comments on the rule in duplicate to: Federal Aviation Administration, Office of the Chief Counsel, Attn: Rules Docket (AGC-204), Docket No. 22782, 800 Independence Avenue SW., Washington, DC 20591.

Comments may be examined in the Rules Docket, weekdays except Federal holidays, between 8:30 a.m. and 5:00 p.m.

FOR FURTHER INFORMATION CONTACT: B. Keith Potts, Airspace and Air Traffic Rules Division, Air Traffic Service, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; telephone (202) 426-3731.

SUPPLEMENTARY INFORMATION:

Comments Invited

Although this amendment is in the form of an emergency final rule which concerns immediate flight safety and, thus, is not preceded by notice and public procedure, comments are invited on this amendment. Comments should be submitted to the address indicated above. Comments received before the date specified will be reviewed and this amendment may be changed in the light of comments received. Commenters wishing the FAA to acknowledge receipt of their comments in response to this rule must submit with those comments a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. 22782." The postcard will be date/time stamped and returned to the commenter.

Background

Subpart A of Part 99 of the Federal Aviation Regulations sets forth flight plan and position reporting requirements for aircraft operating in Air Defense Identification Zones (ADIZ). However, § 99.1(b)(1) excludes from these requirements aircraft operations conducted at a true airspeed of less than 180 knots in a Coastal or Domestic ADIZ north of the 25th parallel or west of the 85th meridian. The geographic area of exclusion encompasses a region (South Florida) known to be rife with aircraft operations involving the transport of illicit drugs. A large portion of this illegal traffic has for some time been accomplished by aircraft flying into the United States through the Coastal ADIZ and into Florida. As a result, necessary State, local, and Federal enforcement pressures have been increasing against such aircraft operators. While the FAA does not enforce the antismuggling and related statutes, it is concerned with the growth of hazards to air commerce in Florida arising in connection with the increasing use of aircraft to escape detection in bringing narcotic drugs, marihuana, and depressant or stimulant drugs into the United States through Florida. Those hazards have increased as the number of pilots who are willing to risk the carriage of these illegal goods under severe enforcement pressures has increased. The means for detection of these aircraft include low altitude radar, pursuit aircraft and advanced police techniques, and are now being supplemented. Any pilot committed to escaping these devices in order to avoid severe penalties may be expected to engage in extremely dangerous flight techniques to avoid pursuit aircraft; very low flight to avoid radar; landing and taking off from unprepared landing areas; and operation in weather conditions beyond the capability of the aircraft or pilot. These flight techniques create a safety hazard for all other aircraft in the area. Thus, while other agencies are responsible for controlling the traffic

chort in the South Florida region is seriously impaired by the exclusion.

In order to meet this threat to aviation safety directly, this amendment reduces the area of exclusion along the south and east coasts of the United States. The area of exclusion for aircraft operated in a Coastal or Domestic ADIZ at less than 180 knots is redefined in § 99.1(b)(1) as north of the 30 degree north parallel and west of the 86 degree west meridian. In effect, all civil aircraft operating in the Coastal or Domestic ADIZ adjacent to almost all of the State of Florida will be subject to the flight plan filing and position reporting requirements of Part 99 regardless of the aircraft's true airspeed. Additionally, revised § 99.11(b) requires the aircraft operator to indicate in the IFR or DVFR flight plan the transponder capability of the aircraft, i.e., transponder, no transponder, transponder with altitude encoding, etc.

The FAA has determined the overall impact of this amendment on users of the system to be minimal. Most pilots and operators as a matter of practice already file flight plans (and make the attendant position reports) in order to avail themselves of the search and rescue services initiated on overdue aircraft. For those who would not ordinarily file a flight plan, it requires only a minimal amount of information and effort. Further, the new requirement for information on transponder capability requires only that the pilot or operator include in the flight plan a one-letter suffix to the aircraft type. The suffix may be obtained from the aeronautical facility with which the flight plan is filed. Also, the Airman's Information Manual provides information concerning the appropriate suffix to be used.

The FAA has also consulted with the Department of State and the Secretary of Defense in accordance with the provisions of Executive Order 10854 inasmuch as this amendment involves airspace outside the United States.

Since this amendment relates to an immediate safety situation in air commerce involving aircraft entering the State of Florida through the ADIZ adjacent to that State, I find the continued operation of the National Air Traffic Control System in a safe and efficient manner requires the immediate adoption of this regulation in the public interest. Therefore, I find that further notice and public procedure thereon are impracticable and contrary to the public interest. I further find that good cause exists for making this regulation effective in less than 30 days after it is published in the Federal Register.

Adoption of the Amendment

Accordingly, §§ 99.1(b)(1) and 99.11(b) of the Federal Aviation Regulations (14 CFR §§ 99.1(b)(1) and 99.11(b)) are amended, effective April 22, 1982.

(Secs. 307, 1110, and 1202, Federal Aviation Act of 1958, as amended (49 U.S.C. §§ 1348, 1510, and 1522); Sec. 6(c), Department of Transportation Act (49 U.S.C. § 1655(c)).

NOTE.—The FAA has determined that this rule is an emergency regulation under the provisions of section 8 of Executive Order 12291 and the Department's Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). It is impracticable for the FAA to follow the procedures of Executive Order 12291 applicable to regulations not issued in response to emergency situations because the safety and efficiency of the national air transportation system require immediate implementation of the rule. If this action is subsequently determined to involve a significant regulation, a final regulatory evaluation or analysis will be prepared and placed in the regulatory docket (otherwise, an evaluation is not required). If one is required, a copy of it, when filed, may be obtained by contacting the persons identified under the caption "FOR FURTHER INFORMATION CONTACT."

SUMMARY: This action amends Part 99 of the Federal Aviation Regulations by changing the lateral boundaries of ADIZ's around the Continental U.S., Alaska, and Guam. Additionally, this action makes editorial changes and deletes references to Distant Early Warning Identification Zones (DEWIZ). Domestic ADIZ's, and Coastal ADIZ's. The action is taken at the request of the Department of Defense for reasons of national security.

DATES: *Effective date:* June 30, 1988. *Comment date:* Comments must be received by August 15, 1988.

ADDRESSES: Comments may be mailed or delivered in duplicate to: Federal Aviation Administration, Office of Chief Counsel, Attention: Rules Docket (AGC-204), Docket No. 25113, 800 Independence Avenue SW., Washington, DC 20591. Comments may be examined in the Rules Docket weekdays, except Federal holidays, between 8:30 a.m. and 5 p.m.

FOR FURTHER INFORMATION CONTACT: Mr. Reginald C. Matthews, Air Traffic Rules Branch, ATO-230, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; telephone (202) 267-8783.

SUPPLEMENTARY INFORMATION:

Comments Invited

Even though this action is in the form of a final rule which involves airspace modifications and was not preceded by notice and public procedure, comments are invited on the rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire on any portion of the rule. When the comment period ends, the FAA will use the comments submitted together with other available information to review the regulations. After the review, if the FAA finds that changes are appropriate, it will initiate rulemaking proceedings to amend the regulations. Comments that provide the factual basis supporting the views and suggestions presented are particularly helpful in evaluating the effects of the rule and determining whether additional rulemaking is needed. Persons wishing the FAA to acknowledge receipt of their comments submitted in response to this final rule must submit with those comments a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. 25113." The postcard will be date/time stamped and returned to the commenter. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report summarizing each substantive public contact with FAA personnel concerned with this rulemaking will be filed in the docket.

Background

Air Defense Identification Zones (ADIZ) are areas of airspace primarily over international waters, that are established to facilitate the monitoring of aircraft operations for national security and other purposes.

On October 23, 1986, the FAA received a petition from the U.S. Military Joint Chiefs of Staff to initiate rulemaking action in order to amend portions of the Pacific and Gulf of Mexico Coastal ADIZs by deleting those areas that lay south of the U.S. border with the Republic of Mexico.

Subsequent requests, the latest of which was received in December 1987, amended the original petition for realignment by requesting the realignment of Alaska DEWIZ to include the Aleutian islands. Additionally, the Joint Chiefs of Staff requested that the FAA make editorial name changes to delete ambiguous terms such as Coastal, Gulf, Domestic, Pacific, and Distant Early Warning when referring to the different areas and, for standardization purposes, use the single term Air Defense Identification Zones. The ADIZ realignment was developed in support of the North American Defense Command (NORAD) mission of controlling access to sovereign airspace and peacetime mission of national security.

Mexican sovereign airspace, specifically, the alteration of the ADIZ in the Gulf of Mexico and in the southwest portion of the U.S., off the coast of lower California, aligns the ADIZ so that it does not extend into the sovereign airspace of the Republic of Mexico.

The alteration of the existing ADIZ boundaries in the Alaskan area would alleviate current flight plan and position reporting requirements for those pilots conducting operations in the Aleutian Island chain who presently depart some of the island airports and routinely must exit and reenter the ADIZ. Additionally, this amendment will eliminate a gap in the ADIZ on the western shore of Canada by providing a continuous ADIZ between the U.S. airspace and the Canadian Domestic ADIZ.

In regard to the requested modification of the Guam ADIZ, the FAA agrees with the DOD that an inner ADIZ for the defense of the Mariana Islands is necessary. Such an ADIZ will facilitate the implementation of new air defense procedures without causing any undue interference with local air traffic.

Additionally, the FAA concurs with the DOD in the simplification of the nomenclature of ADIZs by removing references to specific types and location names of ADIZs. To accommodate the simplification aspect, minor editorial changes are necessary in the following: Sections 99.11, 99.13, 99.17, 99.19, 99.21, 99.23, 99.25, 99.43, 99.45, and 99.47.

The DOD has requested implementation of the revised boundaries of the ADIZ at the earliest possible date which would permit inclusion of the action in revised aeronautical charts to be issued on June 30, 1988. In response to the DOD assessment of the importance of the ADIZ realignment for national defense objectives, the FAA finds that further delay in the implementation of the rule for public notice and comment under 5 U.S.C. Section 553 is impracticable and contrary to the public interest. Further, the FAA notes that a change in the ADIZ boundaries, primarily over international waters, is not the type of action which would normally involve public comment but for the change in the descriptive language in FAR Part 99. Neither the ADIZ action nor the editorial revisions affect in any way the operating procedures which apply in the ADIZ or affect designations of controlled airspace or special-use airspace. Notwithstanding the minimal impact of this action, the FAA is requesting comments on the final rule. Comments received will be used in determining whether additional rulemaking is needed.

For the above reasons the FAA has determined that this action is not a "major rule" under Executive Order 12291; is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and does not warrant preparation of a regulatory evaluation as the overall impact on users of the system is to be minimal.

Federalism Determination

The amendment set forth herein would not have substantial direct effects on the States, on the relationship between the National Government and the States, or on the distribution of power and responsibilities among the various levels of Government. The regulations set forth in this notice would be promulgated pursuant to the authority in the Federal Aviation Act of 1958, as amended (49 U.S.C. 1301, *et seq.*), which has been construed to preempt State law regulating the same subject. Therefore, in accordance with Executive Order 12612, it is determined that such a regulation does not have federalism implications warranting the preparation of a Federalism Assessment.

The FAA has also consulted with the Department of State and the Secretary of Defense in accordance with the provisions of Executive Order 10854 inasmuch as this amendment involves airspace outside of the United States.

Adoption of the Amendment

Accordingly, Part 99 of the Federal Aviation Regulations (14 CFR Part 99) is amended, effective 0901 u.t.c., June 30, 1988.

- 99.1 Applicability**
- 99.3 General**
- 99.5 Emergency situations**
- 99.7 Special security instructions**
- 99.9 Radio requirements**
- 99.11 ADIZ flight plan requirements**
- 99.15 Arrival of completion notice**
- 99.17 Position reports; aircraft operating in or penetrating an ADIZ; IFR**
- 99.19 Position reports; aircraft operating in or penetrating an ADIZ; DVFR**
- 99.21 Position reports; aircraft entering the U.S. through an ADIZ; U.S. aircraft**
- 99.23 Position reports; aircraft entering the U.S. through an ADIZ; foreign aircraft**
- 99.27. Deviation from flight plans and ATC clearances and instructions**
- 99.29 Radio failure; DVFR**
- 99.31 Radio failure; IFR**

Subpart B—Designated Air Defense Identification Zones

Section

- 99.41 General**
- 99.42 Contiguous U.S. ADIZ**
- 99.43 Alaska ADIZ**
- 99.45 Guam ADIZ**
- 99.47 Hawaii ADIZ**
- 99.49 Defense area**

Authority: 49 U.S.C. 1348, 1354(a), 1502, 1510, and 1522; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983).

conducting operations into or out of the U.S. into, within, or across the Contiguous U.S. Air Defense Identification Zone (ADIZ). The rule also requires all civil aircraft, equipped with an operable radar beacon transponder, to have the transponder turned on when conducting operations into or out of the U.S. into, within, or across an ADIZ. The FAA is taking this action to reduce the risk of a midair collision and to reduce the use of aircraft engaged in illegal drug transportation activities and unsafe operating practices when attempting to avoid detection and apprehension.

FOR FURTHER INFORMATION CONTACT: Mr. Reginald C. Matthews, Air Traffic Rules Branch, ATO-230, Airspace-Rules and Aeronautical Information Division, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; telephone (202) 267-8783.

SUPPLEMENTARY INFORMATION:

Background

Prior to March 22, 1982, Part 99 of the Federal Aviation Regulations (FAR) required operators of aircraft conducting flight at true airspeeds greater than 180 knots in an ADIZ to file a flight plan and make periodic position reports. On March 22, 1982, the FAA issued Amendment 99-12 (47 FR 12324) which imposed flight plan and position reporting requirements on aircraft operating in the ADIZ adjacent to most areas of the Florida Peninsula, regardless of speed. The action was taken in response to the increasing hazard to air navigation which resulted from the use of aircraft transporting illegal drugs into the U.S. When Amendment 99-12 was issued, the majority of air smuggling activity was centered in the Florida area.

By way of letter dated July 11, 1985, the Deputy to the Assistant Secretary of the Treasury, on behalf of the U.S. Customs Service (USCS), requested the FAA to take additional regulatory actions that the FAA deemed necessary to enhance identification of all aircraft entering the U.S. Subsequent discussions with the USCS revealed that since the issuance of Amendment 99-12 and as a result of concentrated law enforcement efforts in that area, a significant amount of illegal drug smuggling activity involving small aircraft has been forced into other areas. With this knowledge, the FAA was prompted to seek further regulatory changes to the flight plan filing and position reporting requirements of Part 99.

On November 1, 1985, the FAA issued Amendment No. 91-190 (50 FR 45599) requiring that an aircraft operating in controlled airspace in the U.S. be operated with its transponder on, if so equipped, replying on the appropriate code or as assigned by air traffic control (ATC). This action provided an increased level of safety in the U.S. without placing any burden on the public. The FAA believes that an identical requirement could achieve a similar level of safety in the airspace associated with an ADIZ.

On October 24, 1986, the FAA published Notice No. 86-15 (51 FR 37882) proposing to establish additional flight plan filing and position reporting requirements and transponder operating requirements for all civil aircraft operating into, within, or out of the U.S. through a coastal ADIZ. The amendments to Part 99 contained herein are a result of that notice.

On May 20, 1988, the FAA issued Amendment No. 99-13 (53 FR 18216). This action amended Part 99 of the FAR by changing the lateral boundaries of ADIZs around the Continental U.S., Alaska, and Guam. Additionally, this action made editorial changes and deleted references to Distant Early Warning Identification Zones (DEWIZ), Domestic ADIZs, and Coastal ADIZs.

Analysis of Comments

Interested persons were invited to participate in this rulemaking action by submitting written data, views, or arguments. All comments received were considered before making a determination regarding this final rule. The following is a discussion of the comments received.

sought in the proposals contained in Notice 86-15.

Several commenters expressed doubts regarding the FAA's ability to accommodate an increase in activities expected to result from the proposed rule.

FAA management elements responsible for the airspace in which significant numbers of ADIZ operations occur initiated local informal studies regarding the potential impact of the proposed flight plan filing requirement on the ATC system. With one exception, these studies revealed that the anticipated workload increase would be manageable within existing resources. The one area of exception involves the Gulf of Mexico where approximately 3,000 to 5,000 helicopter operations are conducted daily from the U.S. to points in the corresponding ADIZ. These helicopter operations are primarily conducted in support of the petroleum industry. The greatest volume of these helicopter operations are conducted between the 88-degree and 97-degree west meridian. These helicopters operate along constant flight paths and at altitudes facilitating rapid identification if the need arises. Additionally, the organizations that conduct these operations monitor the flight progress of their respective aircraft and can make such information available to FAA and USCS on a routine basis. Accordingly, the FAA is adopting a final rule which provides for ATC authorizations to deviate from the flight plan filing and position reporting requirements.

Additionally, the FAA believes that there are other operations that are not representative of operations involved in drug smuggling activities and which could be allowed to deviate from the provisions of this final rule without affecting the safety-enhancing provisions of this final rule. Fish-spotting operations conducted from aircraft are an example of such an operation. As with the petroleum platform helicopter operations, deviations will be allowed only when the proponent can show good cause and when safety would not be adversely affected.

Since this rule is effective 60 days after publication, operators who have a need to deviate from the flight plan filing and position reporting requirement should contact the appropriate regional office to apply for such an authorization. Such authorizations can be granted to either fleet-aircraft or single-aircraft operators and may be granted for a single event or for a long term period under a letter of agreement with the FAA.

The flight plan requirement is limited to the ADIZ around the lower 48 States, and does not apply in Alaska, Hawaii, or Guam, where drug smuggling by air is not a significant problem.

Several commenters stated that the measures proposed in Notice 86-15 may contribute to increased hazardous flying methods by criminal elements or the utilization of the proposed procedures to cloak illegal activities.

The FAA does not agree that the flight plan, position reporting or transponder operating requirements of this rule will in any way contribute to increased hazardous aircraft operation by criminal elements. The lack of such requirements enable suspect aircraft to freely select from and transition among several evasive modes of operation, some of which are hazardous to other aircraft operators or persons and property on the surface. By providing law enforcement elements a significantly greater capability to detect criminal operations, a commensurate reduction in evasion methods and transition opportunities can be expected. Ultimately, this will result in enhanced interdiction and reduction in the number of aircraft likely to be engaged in such illegal and hazardous activities.

Also, the FAA is convinced that these new requirements will not increase the opportunity for suspect aircraft to cloak their illegal operations. Government agencies responsible for detecting and deterring such activities initiate search and intercept operations based on information derived through a variety of sources and methods, in addition to the actual tracking of aircraft. However, once tracking has been initiated, these new requirements will greatly contribute to maintaining continual surveillance of a suspect aircraft. Aircraft not operated in compliance with these new regulations may easily be segregated from other operations, and considered suspect. Regardless of whether a suspect aircraft complies or attempts to circumvent these requirements, tracking will be facilitated.

However, a pilot filing such a flight plan is not now required to operate that aircraft's transponder. Continuous operation of the transponder on those aircraft so equipped greatly assists in their identification and tracking. It also enables correlation of radar information with associated flight plan and position reporting information at no additional cost or burden to operators. The FAA is confident that the requirement that aircraft equipped with an operable transponder to keep the transponder turned on while that aircraft is operating in an ADIZ will improve air safety directly through improved radar target acquisition and identification and enhance the drug law enforcement efforts discussed above. This amendment does not mandate the installation of a transponder for flight within the ADIZ, nor is it a precursor for such a requirement. However, the FAA issued Notice 86-1 (51 FR 4756, February 7, 1986), an advance notice of proposed rulemaking, which proposed to require that all aircraft be equipped with a transponder when operating in an ADIZ. The FAA is currently reviewing the comments received regarding that notice and is making a decision whether to undertake further rulemaking action.

A commenter recommended that this rule be annotated in Part 91 to ensure awareness by those pilots that seldom refer to Part 99 or the Airman's Information Manual (AIM).

Pilots are expected to be cognizant of all pertinent regulations regardless of the frequency of time a pilot operates his or her aircraft in a particular airspace. Therefore, inclusion of the requirements under this rule in Part 91 is deemed unnecessary and superfluous. However, the FAA will consider incorporating pertinent parts of this rule in subsequent issues of the AIM.

Regulatory Evaluation Summary

The FAA has reviewed the amendments to Part 99 to determine their economic impact and concluded that the benefits of the regulations outweigh the costs.

Costs

The costs that would result from the amendment are those associated with filing a flight plan and operating a transponder. Filing a flight plan takes from 5 to 15 minutes, depending on the complexity of the plan. Therefore, even if a pilot's time is valued as much as \$30 per hour, filing a flight plan will cost from \$2.50 to \$7.50. The FAA cannot break out the total cost because present data on flights penetrating an ADIZ does not permit breaking out such flights by aircraft with a maximum airspeed of less than 180 knots.

The FAA notes, however, that two types of pilots will be affected by this requirement: those involved in international operations and those involved in domestic operations. Most pilots in legitimate international operations file a flight plan as a safety precaution even in the absence of the regulations. Thus, these pilots are not expected to be extensively impacted by the amendment.

Hundreds of daily domestic operations, such as sightseers, fish spotters, practice flights, etc., depart and land in the U.S. but penetrate the Contiguous U.S. ADIZ during flight. The amended regulations will have a greater effect on these types of operations because they are less likely to file flight plans. On the other hand, these flights are predominantly domestic and normally of short duration. It is anticipated that they will fall in the category of flights requiring the simpler \$2.50 level of flight plan.

The only significant cost to U.S. pilots operating a transponder results from the requirement under §91.172 of the FAR that transponders be maintained and inspected biennially. The required maintenance assures that transponders are properly calibrated and in good functioning order. According to various industry sources, the maintenance required by §91.172 costs from \$75 to \$100 every 2 years or \$35 to \$50 per year. Most pilots who invest from \$875 to \$6,680 to purchase and install a transponder would maintain the equipment in good operating condition, even in the absence of the regulations.

Benefits

The primary benefits expected as a result of the amendment are: Increased efficiency in the detection of aircraft engaged in drug smuggling; and, safety enhancement from the resulting reduction in the number

such aircraft and will reduce the hazard to other aircraft and to persons and property on the surface. Further, the amended rule may save additional lives by improving the effectiveness of rescue missions involving accidents in or near an ADIZ. The effectiveness of these missions would be improved by enhancing the ability of the rescuers to detect the aircraft more easily and to accurately locate the site of an accident as a result of having filed flight plans available and observing the use of transponders.

While the FAA is amending the rule or its potential benefits for air safety, a corollary benefit will also accrue to the USCS. The USCS estimates that intercepting a questionable flight costs approximately \$2,400. The USCS indicates that in recent years, it has been averaging approximately 225 intercept missions per year which proved to be unnecessary because the intercepted flights were not involved in illegal activities. Thus, the USCS spent approximately \$549,000 in each of those years for unnecessary intercept missions. The revised regulations are expected to reduce unnecessary intercepts. Consequently, the USCS would be able to more efficiently utilize its resources in the war against the trafficking of illegal drugs into the U.S.

Cost-Benefit Comparison

As noted above, the estimated costs of the revised regulations are nominal while the estimated benefits could be extensive. The FAA does not have the necessary data to estimate the absolute costs and benefits of the revised regulations because it cannot ascertain with certainty: (1) the number of aircraft with maximum speeds of less than 180 knots that penetrate an ADIZ, (2) the proportion of time that transponders are operated in an ADIZ relative to their total operating time (this is necessary to accurately allocate transponder operating costs), and (3) the extent to which smuggling activities and their associated accidents will be reduced as a result of the revised regulations. However, if the number of affected aircraft is 20 times the 225 annual unnecessary USCS intercepts and if 50 percent of transponder operating costs are allocated to operations in an ADIZ, the costs to these aircraft would range from \$90,000 to \$146,000 per year. These costs compare favorably with the benefits of avoiding one or more fatal aircraft accidents at \$1 million per fatality and with the \$180,000 that the USCS could save by reducing unnecessary flight intercepts by one third.

Initial Regulatory Flexibility Determination

The Regulatory Flexibility Act (RFA) of 1980 was enacted by Congress in order to ensure, among other things, that small entities are not disproportionately affected by Government regulations. The RFA requires that agencies review rules that may have "a significant economic impact on a substantial number of small entities."

The FAA believes that the amendment will generally impact individuals rather than entities. Most commercial operators routinely file flight plans and use their transponders. The only entities that may be affected by the revised regulations are fish spotters and other similar operators. It is impossible to determine how many of these operators do not presently file flight plans or use their transponders when penetrating into, within, and out of the Contiguous U.S. ADIZ and whether or not they constitute a significant number of small entities. In any event, as noted above, the costs of filing a flight plan and operating a transponder cannot be considered significant. Therefore, it is confident that this rule will not have a significant impact on a substantial number of small entities.

Trade Impact Assessment

The revised amendment is expected to have little or no impact on trade opportunities for both U.S. firms doing business overseas and foreign firms doing business in the U.S. Newly manufactured aircraft for the U.S. market, whether made by U.S. or by foreign manufacturers, would not be affected by the regulations because they do not require either additional equipment or equipment modifications. The cost of compliance with the amendment is minimal and most legitimate options would comply with these requirements, even in the absence of the regulations.

proposed in Notice 86-15, effective December 12, 1988.

The FAA believes the safety concerns discussed above can be partly mitigated by requiring that aircraft operations in the Contiguous U.S. ADIZ be conducted under a filed flight plan and by requiring that the operators of those aircraft filing a flight plan provide position reports. The flight plan requirements will not apply to the Alaska ADIZ, Hawaii ADIZ or the Guam ADIZ.

While the ability to correlate radar-detected targets is facilitated by the required flight plan information, in order to reduce the number of aircraft operations involved in illegal drug transportation activities, the FAA is also requiring that all operators in aircraft equipped with a functioning radar beacon transponder, operate that aircraft with the transponder turned on and replying on the appropriate code or on a code assigned by ATC while conducting operations into, within, or across an ADIZ.

Notice 86-15 applied the transponder-on requirement in a coastal ADIZ but not a border ADIZ. The preamble to the notice suggested that there was no apparent need at that time for transponder operation while crossing the Mexican Border ADIZ, which consisted of a line along the U.S.-Mexico border. Amendment 99-13, issued in May 1988, eliminated the distinction between the coastal and border categories of ADIZ. Accordingly, the regulatory language adopted in this action refers to the single term "ADIZ," for consistency with the existing rule. As a result, the transponder-on requirement adopted herein applies to the ADIZ along the Mexican border as well as to those in coastal areas of the U.S. While the technical effect of this requirement is minor, the FAA believes the requirement will promote the general use of transponders and Mode C equipment in transborder operations.

Adoption of the Amendment

Accordingly, the FAA amends FAR Part 99 (14 CFR Part 99) effective December 12, 1988.

The authority citation for FAR Part 99 continues to read:

Authority: 49 U.S.C. 1348, 1354(a), 1502, 1510, and 1522; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983).

Amendment 99-15

Revision of General Operating and Flight Rules

Adopted: August 7, 1989

Effective: August 18, 1990

(Published in 54 FR 34284, August 18, 1989)

SUMMARY: This amendment reorganizes and realigns the general operating and flight rules to make them more understandable and easier to use. Also, several changes are made to provide more flexibility for certain operations. These changes result from comments received from the general public and aviation industry in response to a request for specific comments to help identify substantive areas needing review.

EFFECTIVE DATE: This amendment becomes effective on August 18, 1990, except that § 91.203(a)(2) becomes effective September 18, 1989, and remains numbered as § 91.27(a)(2) until August 18, 1990.

FOR FURTHER INFORMATION CONTACT: William T. Cook (202) 267-3840 or Edna French (202) 267-8150, Project Development Branch (AFS-850), General Aviation and Commercial Division, Office of Flight Standards, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591.

commenters supported the intent of the proposal to reorganize Part 91. However, there were numerous problem areas identified by the commenters relating to the proposed changes that were considered substantive.

On November 18, 1980, the FAA formed a Part 91 Working Group to analyze the AOPA proposal and comments received on the ANPRM. It was determined that certain technical and administrative problems existed and that it was not feasible to undertake a substantive revision of Part 91 at that time. Subsequently, AOPA withdrew its petition. However, review of AOPA's proposal to reorganize and renumber Part 91 revealed that many of the changes had merit and could be implemented. The FAA Part 91 Working Group concluded that the reorganization and renumbering of Part 91 would be the first step to improve the regulation and make it more understandable and easier to use. Consequently, the FAA published NPRM No. 79-2A (46 FR 45256; September 10, 1981), which proposed to reorganize and realign the general operating and flight rules to make them more understandable and easier to use. Other proposals were made to delete redundancies and obsolete compliance dates and to make other minor changes.

Notice No. 79-2A did not contain any substantive changes; however, it did inform the public that the FAA considered that notice to be the first step in a regulatory review of Part 91 consistent with the objective of Executive Order 12291. With this in mind, the FAA invited additional specific comments to help identify substantive areas to be reviewed and possibly included in subsequent proposals concerning Part 91. The notice further stated that the FAA would not take final action concerning the reorganization until substantive changes were proposed and the public had been given an opportunity to comment on those proposals.

The FAA published Notice No. 79-2B (46 FR 60461; December 10, 1981) to extend the comment period for Notice No. 79-2A by 120 days. That notice was issued in response to a petition from the National Business Aircraft Association to allow additional time for commenters to prepare substantive comments.

The FAA received 69 comments in response to Notice No. 79-2A. The majority of these comments favored the proposal and were discussed in Notice No. 79-2C (50 FR 11292; March 20, 1985).

Notice 79-2C proposed four substantive changes in addition to the numerous changes made to reorganize and clarify existing rules. Two of these changes were made in response to comments received from the public. These changes are as follows:

- (1) Section 91.117—Allows reciprocating-powered aircraft to be operated at 200 knots in an airport traffic area;
- (2) Section 91.135—Allows operators desiring authorizations to deviate from positive control area and route segment requirements to utilize a 48-hour oral notification system;
- (3) Section 91.409—Allows operators of turbine-powered rotorcraft to use an alternate inspection program, such as an FAA-approved inspection program; and
- (4) Sections 91.205, 91.509, and 91.511—Defines "shore" as it is used in these sections to exclude tidal flats.

Public Comments

Forty-seven comments were received in response to Notice No. 79-2C. A number of commenters recommended regulations that were not proposed in the notice. Because such comments discuss matters which the public has not had an opportunity to consider, they are beyond the scope of the notice and cannot be considered without further notice and public participation. Some of these comments concern proposals that will be considered by the FAA in future rulemaking and, therefore, could be published in a future notice.

other commenter states that § 1.3(a)(3) already provides that "words importing the masculine gender include the feminine," and the better course would be to refer to the "person," or the "pilot." The FAA agrees with these commenters. Accordingly, references throughout Part 91 that use the words "he" or "she" have been changed to refer to the "person," the "pilot," the "crewmember," or the "Administrator."

One commenter writes that the use of "pilot in command" and "PIC" is inconsistent in the proposed rules. The FAA agrees with this commenter and, accordingly, has changed references to "PIC" in §§ 91.123(a) and 91.129(b) to "pilot in command" to make their use consistent throughout Part 91.

A commenter suggests that all references to distances expressed in miles should state whether they are statute or nautical miles. The FAA agrees that such references should be clear. Accordingly, references to distance expressed in miles in §§ 91.171(b)(4)(ii) and 91.207(e)(3) are changed by adding the word "nautical" to reflect that the distances are expressed in nautical miles since they reference ground-measured distance. References to visibilities in §§ 91.155(b), 91.167(b)(2)(ii), and 91.303(e) are changed by adding the word "statute" to reflect that visibilities are expressed in statute miles.

Several commenters state that the proposed wording for § 91.1 implies that operations of moored balloons, kites, unmanned rockets, and unmanned free balloons are governed by Part 103. This comment has merit and § 91.1 is revised by adding a specific reference to Part 101 after the phrase "unmanned free balloons" to make clear that moored balloons, kites, unmanned rockets, and unmanned free balloons operate under Part 101.

Another commenter requests clarification of the discussion of § 91.7 in Notice No. 79-2C, where the FAA states that there is no provision for the use of an approved Minimum Equipment List (MEL) in Part 91 operations, whereas § 91.213 permits the use of an approved MEL. The FAA points out that at the time Notice No. 79-2C was published, the effective date of current § 91.30 (proposed § 91.213) was stayed indefinitely (44 FR 62884; November 1, 1979). Amendment No. 91-192 (50 FR 51188; December 13, 1985) which took effect on March 13, 1986, terminated the stay.

Section 91.7(b), which was proposed without substantive change from existing § 91.29, provides that a flight should be discontinued when unairworthy mechanical or structural conditions occur. One commenter suggests that this be changed by deleting "mechanical or structural" and making it more general so as to provide for a possible unairworthy electrical system. This suggestion raises a valid point; however, the FAA has determined that the rule should be amended to explicitly reference mechanical, electrical, or structural conditions. Therefore, § 91.7(b) is amended accordingly.

As suggested by one commenter, § 91.21(a)(1) is amended by deleting reference to a "commercial operator." This revision conforms § 91.21(a)(1) with SFAR 38-2 and Part 125 which do not provide for a commercial operator's certificate and, instead, provide for the issuance of either an "air carrier operating certificate" or an "operating certificate."

One commenter states that consideration should be given to better defining "appropriately rated pilot" in § 91.109 and provide a definition. The FAA agrees that the phrase "appropriately rated pilot" should be defined better.

The preamble to Amendment No. 91-36 (32 FR 260; January 11, 1967) states that an "appropriately rated pilot" in § 91.21(b) requires a private pilot certificate with an airplane category rating, a multiengine class rating for a small multiengine land plane, and a type rating for a large airplane or a turbojet-powered airplane (large or small).

Accordingly § 91.109(b)(1) is amended to require that the safety pilot hold at least a private pilot certificate with category and class ratings appropriate to the aircraft being flown.

One commenter urges the FAA to reinsert the current rule regarding visual descent points (VDPs) (current § 91.116). VDPs are not an integral part of the approach procedure. An aircraft that is not

For these reasons, the final rule, like the NPRM, does not include a mandatory VDP requirement.

Notice No. 79-2C proposed that § 91.175(a) read: "Unless otherwise authorized by ATC, when an instrument letdown to a civil airport is necessary, each person operating an aircraft, except a military aircraft of the United States, shall use a standard instrument approach procedure prescribed for the airport in Part 97 of this chapter." The lead-in clause is changed to read, "Unless otherwise authorized by the Administrator," because ATC does not have the authority to approve a person's noncompliance with this rule.

Several commenters raise objections to proposed § 91.203(a)(2), which would prevent an aircraft from operating outside of the United States under the temporary authority of the pink copy of the Aircraft Registration Application as provided in § 47.31(b). The commenters assert that the proposal is a substantive change and not a clarification of the present rule; and that the FAA should consider the economic impact on the industry, the consumers, and the historical precedence of past practices. These commenters suggest that the FAA withdraw the proposal and acknowledge the pink copy of the application as a temporary certificate of registration.

Another commenter is of the opinion that the FAA has not provided discussion, as required by Executive Order 12291, on the economic impacts that would result from the delay between application for an issuance or denial of the registration certificate, under the proposals, in the NPRM. The commenter maintains that future investment purchases and leases would also be adversely affected. Several commenters also question the regulatory consistency that the FAA claims as the basis for the change.

These comments were responded to in full in a Notice of Legal Opinion issued December 1988 (53 FR 50208; December 14, 1988). That Notice of Legal Opinion stated that the limitation of temporary authority to operate an aircraft without registration to domestic operations (as also provided in new § 91.203(a)(2)) reflects current U.S. law and practice. Concerning the economic impact of this ruling, the FAA in that Notice of Legal Opinion answered:

The aviation community has always been able to transfer ownership and register their aircraft with minimal difficulty. In order to mitigate the potential hardship that could result from grounding an aircraft used in international operations, pending receipt of a registration certificate, the Registry will, upon request, telex a copy of the Certificate of Aircraft Registration to the individual whose name appears on the application as the registered owner of the aircraft. The telex copy is issued after confirmation of the information contained on an Aircraft Registration Application and determination of eligibility for registration. The telex, which reflects critical and verified information resulting from the evaluation by the Registry of an application for aircraft registration, may be used as a temporary Certificate of Aircraft Registration until the original certificate is forwarded for carriage in the aircraft.

This telex certificate will assist owners who submit an application for aircraft registration and who wish to operate the aircraft as soon as possible in international operations. Since the telex, by its terms, is a form of registration certificate, the aircraft may be operated in international air navigation consistent with Article 29 of the Convention [Convention on International Civil Aviation (61 Stat. 1180; T.I.A.S. 1591; 15 U.N.T.S. 295)]. The Registry will telex this copy within a matter of days—often within 48 hours—to be kept in the aircraft until the original Certificate of Aircraft Registration (AC Form 8050-3) is forwarded to the registered owner.

Accordingly, the FAA has determined that the rule should be amended as proposed, and consistent with the Chief Counsel's legal opinion, to provide explicitly that operations of aircraft outside the United States for which an application for registration has been submitted but certificate of registration has not been issued are not authorized under the Federal Aviation Regulations.

Several judicial decisions have defined the "shore" as including tidal flats. In some parts of the United States, these tidal flats can extend for several miles and, because of the extreme tides prevalent in these areas, the land may be submerged under as much as 25 to 35 feet of water during periods

has been corrected to read "is."

In addition to the specific changes discussed above, minor changes have been made in the wording of the regulations proposed in Notice No. 72-2C. In § 91.3(b), the word "in-flight" has been inserted to clarify that the deviation authority of § 91.3 applies only to in-flight emergencies which affect the safe completion of the flight.

The original intent of § 91.3 was to allow the pilot in command to deviate from certain regulations in the event of an in-flight emergency. Over time, regulations involving non-flight items were inserted into Subparts A and B, while flight-related regulations were inserted in other Subparts. Therefore, the word "in-flight" is being added to return the language to its original intent.

Other changes are nonsubstantive in nature. Except for such minor revisions, those parts of the proposal for which there were no comments are adopted as proposed. Finally, all other sections of Part 91 remain unchanged except for renumbering (see the cross-reference lists below).

Several amendments to Part 91 adopted since Notice No. 79-2C were published are reflected in the final rule. Where reference to other sections of this part were set forth in an amendment, the references have been changed to reflect the appropriate sections as used in the final rule. Those required changes published in the Federal Register prior to June 19, 1989, are discussed below.

Amendment No. 91-188, (50 FR 15380; April 17, 1985) amended current § 91.11, which governs the use of alcohol or drugs by any crewmember performing duty during the operation of an aircraft. This amendment took effect on June 17, 1985. Subsequently, Amendment No. 91-194 (51 FR 1229; January 9, 1986) amended § 91.11(c) to impose a requirement for a crewmember to furnish the results of any test that indicates percentage by weight of alcohol in a crewmember's blood. This amendment took effect on April 9, 1986. Proposed § 91.17 has been revised accordingly.

Amendment No. 91-189 (50 FR 31588; August 5, 1985) removed references to "expect approach clearance time" in § 91.127. This amendment took effect on September 4, 1985. Section 91.185 reflects this amendment.

Amendment No. 91-190 (50 FR 45602; November 1, 1985) added a new paragraph (c) to current § 91.24. This amendment took effect on December 2, 1985. This new paragraph required all aircraft equipped with an operable radar beacon transponder be turned on while airborne in controlled airspace. Subsequently, § 91.24(c) was amended by Amendment No. 91-203 (53 FR 23374; June 21, 1988). Proposed § 91.215(c) has been redesignated as paragraph (d) and the changes brought about by Amendment Nos. 91-190 and 91-203 have been incorporated into revised § 91.215(c).

Amendment No. 91-191 (50 FR 46877; November 13, 1985) amended current § 91.14 (proposed § 91.107) by revising the title and the section to include reference to shoulder harnesses. This amendment took effect on December 12, 1985. Section 91.107 has been revised accordingly. Amendment No. 91-191 also added a new paragraph to current § 91.33 which requires a shoulder harness for specified seats in normal, utility, and acrobatic category airplanes with a seating configuration, excluding pilot seats, of nine or less, manufactured after December 12, 1986. This paragraph appears as § 91.205(b)(15).

Amendment No. 91-192 (50 FR 51189; December 13, 1985) terminated the suspension of Amendment No. 91-157 (44 FR 43714; July 26, 1979) staying the effective date of current § 91.30. This amendment took effect on March 31, 1986. Subsequently, Amendment No. 206 (53 FR 50195; December 13, 1988) amended § 91.30. Section 91.213 reflects these amendments.

Amendment No. 91-193 (50 FR 51193; December 13, 1985) changed the FAA's description of North Atlantic (NAT) Minimum Navigation Performance Specifications (MNPS) airspace to coincide with the International Civil Aviation Organization's (ICAO's) description of the NAT MNPS airspace. This has been reflected accordingly in Section 1 of Appendix C of this final rule.

Current § 91.171 was amended to include helicopters in the altimeter system and altitude reporting equipment tests and inspection requirements. Proposed § 91.411 has been amended to reflect this change. In order to enable rotorcraft to perform Category II operations, Amendment No. 91-196 also amended Appendix A in Part 91 by removing the word "airplane" and replacing it with the word "aircraft" wherever it appears.

Amendment No. 91-197 (52 FR 1836; January 15, 1987) revises the authority citation for Part 91 and adds a new paragraph to current § 91.213 which states that a commuter category airplane must have a pilot designated as second in command, unless the airplane has a passenger seating configuration, excluding pilot seats, of nine or less seats, and is type certificated for operations with one pilot. This amendment took effect on February 17, 1987. This rule now appears as § 91.531(a)(3).

Amendment No. 91-198, (52 FR 3391; February 3, 1987) amended current § 91.24 (a) and (b) on ATC transponder and altitude reporting equipment and use. This amendment took effect on April 6, 1987. Subsequently, Amendment No. 91-203 (53 FR 23374; June 21, 1988) amended § 91.24 (b) and (c) and Amendment No. 91-210 (54 FR 25682; June 16, 1989) revised § 91.24(a).

Proposed § 91.215 has been revised accordingly. Amendment No. 91-198 also revised paragraph (b)(2)(iii) of current § 91.90 to allow operations conducted prior to December 1, 1987, in Group II TCAs, to be exempt from the new equipment requirements of current § 91.24. Amendment No. 91-203 (53 FR 23374; June 21, 1988) subsequently revised § 91.90, effective July 21, 1988. Amendment No. 91-205 (53 FR 40323; October 14, 1988) further revised § 91.90 in its entirety effective January 12, 1989. Amendment No. 90-209 (54 FR 24883; June 9, 1989) amended § 91.90 by delaying the effective date of the section for helicopter operations. The rule, covering all amendments to date, appears in this revision as § 91.131.

Amendment No. 91-199, (52 FR 9636; March 25, 1987) amended current § 91.35 by renumbering the paragraphs and adding a new paragraph that requires any operator who has installed approved flight recorders and approved cockpit voice recorders to keep the recorded information for at least 60 days, or longer, if requested by the Administrator or the National Transportation Safety Board. This amendment took effect on May 26, 1987. The amended rule now appears as § 91.609.

Amendment No. 91-200, (52 FR 17277; May 6, 1987) amended current § 91.173 by requiring each registered aircraft owner or operator to keep "preventive maintenance" records as well as maintenance, alteration, and records of the 100-hour annual, progressive, and other required or approved inspections, as appropriate, for each engine, propeller, rotor, and appliance of an aircraft. This amendment took effect on June 5, 1987. This amended rule now appears as § 91.417(a)(1).

Amendment No. 91-201, (52 FR 20028; May 26, 1987) adds the reference to Part 129 to the exception in current § 91.161(b) from the requirements of §§ 91.165, 91.169, 91.171, 91.173, and 91.174 for aircraft maintained in accordance with a continuous maintenance program as provided for in Part 129. The amendment took effect on August 25, 1987. This amended rule now appears as § 91.401(b).

Amendment No. 91-202, (52 FR 34102; September 9, 1987 and 52 FR 35234; September 18, 1987) amended current § 91.27 on civil aircraft certification requirements by adding a new paragraph (c) to require that a copy of the form which authorized the alteration of an aircraft with fuel tanks within the passenger or a baggage compartment be kept on board the modified aircraft. This new rule now appears as § 91.203(c). Current § 91.173 on maintenance records was revised by requiring that such records be made available to the Administrator or an authorized representative of the National Transportation Safety Board and when such a fuel tank is installed as set forth in § 91.35 as amended pursuant to Part 43, a copy of the FAA Form 337 be kept on board the modified aircraft. This new rule appears as § 91.417 (b) and (c). This amendment took effect on December 8, 1987.

Amendment No. 91-203, (53 FR 23374; June 21, 1988, 53 FR 25050; July 1, 1988, and 53 FR 26592; July 14, 1988) amended or revised § 91.24 (ATC transponder and altitude reporting equipment

new Appendix E to Part 91 for airplanes and in a new Appendix F to Part 91 for helicopters. The amendment is reflected as § 91.609 (b), (c), (d), and (e), and new Appendixes E and F to Part 91. This amendment becomes effective on October 11, 1991.

Amendment No. 91-205 (53 FR 40323; October 14, 1988) revised the classification and pilot and equipment requirements for conducting operations in terminal control areas (TCAs) by amending § 91.90 to establish a single-class TCA; require the pilot in command of a civil aircraft to hold at least a private pilot certificate, except for a student pilot who has received certain documented training; and, to eliminate the helicopter exception from the minimum equipment requirement. The amendment was effective on January 12, 1989. Subsequently, Amendment No. 91-209 (54 FR 24883; June 9, 1989) amended § 91.90(c)(1) by delaying the application of the section for helicopter operations for one year. Revised § 91.131 covers these amendments.

Amendment No. 91-206 (53 FR 50195; December 13, 1988) amended § 91.30 to permit rotorcraft, nonturbine-powered airplanes, gliders, and lighter-than-air aircraft, for which an approved Master Minimum Equipment List has not been developed, to be operated with inoperative instruments and equipment not essential for the safe operation of the aircraft. The amendment also permits general aviation operators of small rotorcraft, nonturbine-powered small airplanes, gliders, and lighter-than-air aircraft for which a Master Minimum Equipment List has been developed, the option of operating under the minimum equipment list concept, or under other conditions as set forth in the amendment. Amendment No. 91-206 also amended § 91.165 to require that any inoperative instrument or item of equipment permitted to be inoperative under the new amended § 91.30 to be repaired, replaced, removed, or inspected at the next required inspection for the aircraft. These amendments became effective on December 13, 1988, and appear as §§ 91.213 and 91.405 of this revision to Part 91.

Amendment No. 91-207 (54 FR 265; January 4, 1989) amended §§ 91.1 and 91.61 to extend the controlled airspace and the applicability of certain air traffic rules to coincide with presidential action to extend the territorial sea of the United States for international purposes, from 3 to 12 nautical miles from the U.S. coast. This amendment became effective on December 27, 1988. These amended rules now appear as §§ 91.1 and 91.101.

Amendment No. 91-208 (54 FR 950; January 10, 1989) added a new § 91.26 to require that any traffic alert and collision avoidance system installed in a U.S.-registered civil aircraft must be approved by the Administrator, and if installed, must be on and operating during the aircraft's operation. The amendment became effective on February 9, 1989. The amendment appears herein as § 91.221.

Amendment No. 91-209 (54 FR 24883; June 9, 1989) delays the effective date of certain navigational equipment requirements of helicopter operations in a Terminal Control Area (TCA) by the amendment of § 91.90(c)(1). The amendment became effective on June 6, 1989. Section 91.131 covers this amendment.

Amendment No. 91-210 (54 FR 25682; June 16, 1989), effective June 16, 1989, amended § 91.24(a) to allow certain aircraft operators to install non-Mode S transponders in aircraft until July 1, 1992, instead of until January 1, 1992, provided that such transponders are manufactured prior to January 1, 1991, instead of prior to January 1, 1990. This amendment appears as § 91.215(a).

References to Part 91 found in other sections of the Federal Aviation Regulations have also been amended to incorporate the revised numbering of Part 91. These miscellaneous amendments are found at the end of the amendments to Part 91.

Furthermore, §§ 91.615 through 91.645 as identified in Notice No. 79-2C (50 FR 11292; March 20, 1985) now appear in this final rule as §§ 91.503 through 91.533.

Regulatory Evaluation

FAA analysis indicates that these amendments will not have a significant impact on the public or any level of government on an annual basis. The final rule includes changes to clarify the existing

(1) the normal cruise speed for most single engine reciprocating-powered aircraft does not exceed 156 knots, and (2) pilots of most multiengine reciprocating-powered aircraft, while operating within an airport traffic area, will not exceed the normal aircraft cruising speed which is not significantly greater than 156 knots in many of these aircraft.

Section 91.135 provides for a 2-day advance oral notification for submitting requests for authorizations to deviate from positive control area and route segment requirements. The old rule required a 4-day advance written notification of the proposed operation to ATC. A request for an authorization to deviate from these requirements is an infrequent occurrence. Consequently, the new rule will have minor benefits in terms of cost savings.

Sections 91.205, 91.509, and 91.511 clarify the definition of "shore" as that area of land adjacent to the water which is above the high water mark, thereby excluding tidal flats. From a safety standpoint, a tidal area covered with water is not as safe an emergency landing place as a dry shoreline. The main benefit is improved survivability from accidents in areas where for-hire operators may not be in compliance with the intent of the present rule. There is insufficient information in accident records to be able to estimate how many deaths could have been avoided through the use of life jackets and pyrotechnic signaling devices in these instances.

Costs

Any cost associated with defining "shore" in §91.205 as the high water line is expected to be negligible. The only parties potentially affected are small for-hire operators who do not comply with the obvious intention of the rule as presently worded. The FAA believes these operators are very few (probably less than 20 operators) in number. Such operators are likely to be traversing tidal flats in areas like Alaska. If such operators do not comply with the rule as written now, then the cost of compliance would be a maximum of about \$105 per year per aircraft. This assumes a \$50 cost for an approved flotation device per seat and a flotation device useful life of 5 years (\$10 per passenger seat per year), 10 seats per aircraft for these specific operators, plus \$5 per year per aircraft for a pyrotechnic signaling device.

Section 91.409 allows operators of turbine-powered rotorcraft to use alternate inspection programs such as inspections under an FAA-approved continuous airworthiness maintenance program. The operators may now schedule inspections in a manner that allows the highest level of utilization of their rotorcraft.

The FAA estimates that in 1984 there were approximately 3,000 active turbine-powered rotorcraft in non-air taxi use. The FAA assumes that about one-half of the operators of these aircraft would use the new inspection options.

The value of using these options is difficult to estimate. At a minimum, the major effect of this proposed rule would be one additional day per year of rotorcraft utility. The usefulness of this can be set at least at the cost of capital for 1 day. Using an average aircraft value of \$300,000 and a use of 250 days per year, the cost of capital can be estimated at \$180 per day (\$300,000 at 15 percent interest divided by 250 days). Thus, the minimum benefit is approximately \$0.27 million per year (half the fleet, 1,500 turbine-powered rotorcraft times \$180). As the fleet grows, the value of this benefit also increases.

Because of the reorganization and resulting renumbering of provisions, persons who regularly refer to existing Part 91 must familiarize themselves with the new structure. It is also recognized that many nonregulatory materials containing references to present Part 91 sections may have to be modified. To assist in reference to the new provisions, a redesignation table, similar to the cross-reference table published herein, will be included in subsequent editions of the Code of Federal Regulations. The FAA believes that any short-term costs associated with transition to the reorganized Part 91 will be outweighed by the benefits inherent in a more logically organized set of regulations.

All but four of the changes to Part 91 are editorial or clarifying changes. Three of the four changes result only in minimal benefits being applied. The other is a change to § 91.205 which, while it is basically clarifying, may involve some minimal cost and benefit. Any economic impact would be minor—approximately \$100 per aircraft per year, and would affect only a few small for-hire operators in Alaska who do not comply with the intent of the rule as presently worded. Thus, the change could not be construed to cause “significant economic impact on a substantial number” of small entities within the meaning of the RFA. Therefore, this rule will not have a significant economic impact on a substantial number of small entities.

Conclusion

The FAA has determined that this document is not considered major under Executive Order 12291 or significant under Department of Transportation Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). It causes only four minor changes, three of which will provide benefits with no additional costs to the aviation public. The fourth will impose negligible costs which are substantially outweighed by the benefits provided. Other amendments provide general benefits by deleting obsolete requirements, relaxing certain operating and flight rule requirements, and updating and clarifying the text. Under the provisions of Executive Order 12291, the amendments in this final rule will not have a major economic effect on consumers; industries; Federal, State, or local government agencies; or geographic regions. There will be no significant effects on competition, employment, investment, productivity, innovations, or the ability of U.S.-based enterprises to compete with foreign-based enterprises in domestic or import markets. It is certified that under the criteria of the Regulatory Flexibility Act this final rule will not have a significant economic impact on a substantial number of small entities. A copy of the full economic evaluation is filed in the public docket and may be obtained by contacting the person listed in the “FOR FURTHER INFORMATION CONTACT” paragraph of this document.

Cross Reference

To identify where present regulations are relocated in the new rule, the following cross-reference lists are provided:

Cross Reference Table

<i>Old Section</i>	<i>New Section</i>
91.1	91.1 and 91.703
91.2	91.193
91.3	91.3
91.4	91.5
91.5	91.103
91.6	91.189
91.7	91.105
91.8	91.11
91.9	91.13
91.10	91.13
91.11	91.17
91.12	91.19
91.13	91.15
91.14	91.107
91.15	91.307
91.17	91.309
91.18	91.311
91.19	91.21
91.20	91.705
91.21	91.109
91.22	91.151

91.31	91.9
91.32	91.211
91.33	91.205
91.34	91.191
91.35	91.609
91.36	91.217
91.37	91.605
91.38	91.323
91.39	91.313
91.40	91.315
91.41	91.317
91.42	91.319
91.43	91.711
91.45	91.611
91.47	91.607
91.49	91.603
91.50	Deleted
91.51	91.219
91.52	91.207
91.53	Deleted
91.54	91.23
91.55	91.817
91.56	91.815
91.57	91.25
91.58	91.613
91.59	91.321
91.61	91.101
91.63	91.903
91.65	91.111 and 91.123
91.67	91.113
91.69	91.115
91.70	91.117
91.71	91.303
91.73	91.209
91.75	91.123
91.77	91.125
91.79	91.119
91.81	91.121
91.83	91.153 and 91.169
91.84	91.707
91.85	91.127
91.87	91.129
91.88	91.130
91.89	91.127
91.90	91.131
91.91	91.137
91.93	91.305
91.95	91.133
91.97	91.135
91.100	91.139
91.101	91.709
91.102	91.143
91.103	91.713
91.104	91.141
91.105	91.155
91.107	91.157
91.109	91.159
91.115	91.173

91.129	91.187
91.161	91.401
91.163	91.403
91.165	91.405
91.167	91.407
91.169	91.409
91.170	91.415
91.171	91.411
91.172	91.413
91.173	91.417
91.174	91.419
91.175	91.421
91.181	91.501
91.183	91.503
91.185	91.505
91.187	91.507
91.189	91.509
91.191	91.511
91.193	91.513
91.195	91.515
91.197	91.517
91.199	91.519
91.200	91.521
91.201	91.523
91.203	91.525
91.205	Deleted
91.207	Deleted
91.209	91.527
91.211	91.529
91.213	91.531
91.215	91.533
91.301	91.801
91.302	91.803
91.303	91.805
91.305	91.807
91.306	91.809
91.307	91.811
91.308	91.813
91.309	91.819
91.311	91.821
Appendix A	Appendix A
Appendix B	Appendix B
Appendix C	Appendix C
Appendix D	Appendix D
Appendix E	Appendix E
Appendix F	Appendix F

Cross Reference Table

<i>New Section</i>	<i>Old Section</i>
91.1	91.1
91.3	91.3
91.5	91.4
91.7	91.29
91.9	91.31
91.11	91.8

91.101	91.61
91.103	91.5
91.105	91.7
91.107	91.14
91.109	91.21
91.111	91.65
91.113	91.67
91.115	91.69
91.117	91.70
91.119	91.79
91.121	91.81
91.123	91.75 and 91.65
91.125	91.77
91.127	91.85 and 91.89
91.129	91.87
91.130	91.88
91.131	91.90
91.133	91.95
91.135	91.97
91.137	91.91
91.139	91.100
91.141	91.104
91.143	91.102
91.151	91.22
91.153	91.83
91.155	91.105
91.157	91.107
91.159	91.109
91.167	91.23
91.169	91.83
91.171	91.25
91.173	91.115
91.175	91.116
91.177	91.119
91.179	91.121
91.181	91.123
91.183	91.125
91.185	91.127
91.187	91.129
91.189	91.6
91.191	91.34
91.193	91.2
91.201	New
91.203	91.27
91.205	91.33
91.207	91.52
91.209	91.73
91.211	91.32
91.213	91.30
91.215	91.24
91.217	91.36
91.219	91.51
91.221	91.26
91.301	New
91.303	91.71
91.305	91.93
91.307	91.15
91.309	91.17
91.311	91.18

91.403	91.163
91.405	91.165
91.407	91.167
91.409	91.169
91.411	91.171
91.413	91.172
91.415	91.170
91.417	91.173
91.419	91.174
91.421	91.175
91.501	91.181
91.503	91.183
91.505	91.185
91.507	91.187
91.509	91.189
91.511	91.191
91.513	91.193
91.515	91.195
91.517	91.197
91.519	91.199
91.521	91.200
91.523	91.201
91.525	91.203
91.527	91.209
91.529	91.211
91.531	91.213
91.533	91.215
91.601	New
91.603	91.49
91.605	91.37
91.607	91.47
91.609	91.35
91.611	91.45
91.613	91.58
91.701	New
91.703	91.1
91.705	91.20
91.707	91.84
91.709	91.101
91.711	91.43
91.713	91.103
91.715	91.28
91.801	91.301
91.803	91.302
91.805	91.303
91.807	91.305
91.809	91.306
91.811	91.307
91.813	91.308
91.815	91.56
91.817	91.55
91.819	91.309
91.821	91.311
91.901	New
91.903	91.63
91.905	New
Appendix A	Appendix A
Appendix B	Appendix B
Appendix C	Appendix C

For the reasons set forth above, Part 91 of the Federal Aviation Regulations (14 CFR Part 91) is revised and Parts 1, 21, 23, 25, 27, 31, 33, 35, 36, 43, 45, 47, 61, 63, 65, 71, 93, 99, 103, 121, 125, 127, 133, 135, 137, and 141 of the Federal Aviation Regulations (14 CFR Parts 1, 21, 23, 25, 27, 31, 33, 35, 36, 43, 45, 47, 61, 63, 65, 71, 93, 99, 103, 121, 125, 127, 133, 135, 137, and 141) are amended effective August 18, 1990.

The authority citation for Part 99 continues to read as follows:

Authority: 49 U.S.C. 1348, 1502, 1510, and 1522; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983).

Amendment 99-16

Transponder Requirements in an Air Defense Identification Zone (ADIZ)

Adopted: February 16, 1990

Effective: April 6, 1990

(Published in 55 FR 8390, March 7, 1990)

SUMMARY: This action establishes requirements for all civil aircraft to be equipped with a transponder (basic transponder or Mode S transponder) with automatic altitude reporting equipment (referred to in this document as "a transponder with Mode C") when conducting operations into or out of the United States into, within, or across the contiguous U.S. ADIZ. The FAA is taking this action to reduce the risk of a midair collision and to reduce the use of aircraft engaged in the illegal transportation of drugs.

FOR FURTHER INFORMATION CONTACT: Mr. William C. Davis, Air Traffic Rules Branch, ATO-230, Airspace-Rules and Aeronautical Information Division, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; telephone (202) 267-8783. Copies of this document may be obtained by submitting a request to the Federal Aviation Administration, Office of Public Affairs, APA-200, 800 Independence Avenue SW., Washington, DC 20591, or by calling (202) 267-3479. Communications must identify the amendment number of the document.

SUPPLEMENTARY INFORMATION:

Background and Related Rulemaking Actions

On March 18, 1982, the FAA issued Amendment No. 99-12, Security Control of Air Traffic; Modification of Flight Plan Filing Requirements for Operations in Coastal ADIZ (47 FR 12324). This rule amended Part 99 of the Federal Aviation Regulations (FAR) to require aircraft operating at a true airspeed of less than 180 knots in certain areas to meet the flight plan filing and other requirements of that part. Additionally, the rule established a requirement that an aircraft's transponder capability be included in the flight plan. The effort was in response to a threat to safety in air commerce by aircraft operating illegally with respect to transportation of drugs through airspace adjacent to the State of Florida.

By way of letter dated July 11, 1985, the Deputy to the Assistant Secretary of the Treasury, on behalf of the U.S. Customs Service (USCS), requested the FAA take additional regulatory actions as deemed necessary by the FAA to enhance the identification of all aircraft entering the United States. Subsequent discussions with the USCS revealed that since the issuance of Amendment No. 99-12, and as a result of concentrated law enforcement efforts in the targeted area (Florida Peninsula), a significant

On May 13, 1988, the FAA issued Amendment No. 99-13, Security Control of Air Traffic; Modification of U.S. ADIZ (53 FR 18216). This rule amended Part 99 of the FAR by changing the lateral boundaries of ADIZs around the contiguous United States, Alaska, and Guam. In addition, this effort made editorial changes and deleted references to Distant Early Warning Identification Zones, Domestic ADIZs, and Coastal ADIZs.

On June 17, 1988, the FAA issued Amendment No. 91-203, Transponder with Automatic Altitude Reporting Capability Requirement (53 FR 23356). The rule requires most aircraft operating in busy terminal areas and all aircraft operating at or above 10,000 feet mean sea level (MSL) to be equipped with a transponder and automatic altitude reporting equipment. The rule will be implemented in two phases. Phase I, effective July 1, 1989, required all aircraft: (1) operating within 30 miles of any terminal control area (TCA) primary airport, and (2) operating at and above 10,000 feet MSL to be equipped with a Mode C transponder. Phase II is effective December 30, 1990, and will require pilots that plan operations: (1) within and above an airport radar service area (ARSA) up to 10,000 feet MSL, and (2) within a 10-mile radius of two specially designated airports from the surface up to 10,000 feet MSL, excluding the airspace below 1,200 feet above ground level (AGL) outside of the airport traffic area for that airport, to be equipped with a Mode C transponder.

On October 5, 1988, the FAA issued Amendment No. 99-14, Flight Plan and Transponder Requirements in an ADIZ (53 FR 39842). This rule amended Part 99 of the FAR by establishing a flight plan and position report requirements for all civil aircraft conducting operations into or out of the United States into, within, or across the contiguous U.S. ADIZ. Further, this rule requires all civil aircraft, equipped with an operable radar beacon transponder, to have the transponder turned on and replying on the appropriate code or on a code assigned by air traffic control (ATC) when conducting operations into or out of the United States into, within, or across an ADIZ.

On October 5, 1988, the FAA issued Notice No. 88-17, Transponder Requirements in an ADIZ (53 FR 39846). This notice proposed a requirement for all civil aircraft to be equipped with a transponder and automatic altitude reporting equipment when conducting operations into or out of the United States into, within, or across an ADIZ.

On November 18, 1988, the Anti-Drug Abuse Act of 1988 (Public Law 100-690) was enacted. This law, in part, requires the Secretary of Transportation to study the feasibility, costs, and benefits associated with drug interdiction of requiring each pilot operating an aircraft which enters the continental United States to have—(1) an operating transponder installed in the aircraft; (2) a flight plan filed with the FAA; (3) transmission of a transponder code which can be used to identify the aircraft in the most efficient manner; and (4) a transponder signal which provides information that will ensure that the aircraft is following its filed flight plan.

Analysis of Comments

In response to the proposals detailed in Notice No. 88-17, the FAA received a total of five comments. The following is a categorization and discussion of those comments received.

Comment Period Too Short

An aviation organization suggested that the comment period was too short and did not allow for secondary publication to its membership. This organization believes that a 120-day comment period is the minimum necessary to provide for its standard publication lead times. Other commenters also objected to the 32-day comment period assigned to Notice No. 88-17.

On December 5, 1985, the FAA issued an advance notice of proposed rulemaking (ANPRM), Notice No. 86-1, Transponder Requirements; Operations In or Out of U.S. Through a Coastal ADIZ (51 FR 4756). This ANPRM proposed to require a transponder for operations associated with an ADIZ. A 90-day comment period was assigned to this ANPRM. Because only five comments were received during

not have jurisdiction for enforcement of anti-smuggling and related statutes, it is concerned with the growth of hazards to U.S. air commerce arising in connection with the increasing use of aircraft involved in such illegal activities. The FAA believes that the flight practices of persons conducting illegal drug activities in aircraft create safety hazards for other aircraft used in legitimate operations in the same airspace as well as to persons and property on the surface. For instance, in order to escape detection, pilots of aircraft transporting illegal drugs into the United States may be expected to engage in extremely dangerous flight techniques.

Such techniques include flying very low to avoid radar detection, landing and taking off from unprepared landing areas, and operating in weather conditions beyond the capability of the aircraft or pilot. Thus, while other agencies are responsible for controlling the activities involved in the transportation and importation of illegal drugs and while the mere carriage of those items under normal conditions is not dangerous, the conduct of pilots engaged in smuggling activity poses a direct threat to air commerce.

For national defense purposes, aircraft operating from outside the United States to destinations in the United States are subject to an identification process which involves, in part, the detection of these aircraft on radar. Once detected on radar, an aircraft's position is correlated with known flight plan information and any position reports that have been made. An aircraft with an operating transponder can be identified more quickly and more positively than an aircraft without a transponder. Having aircraft equipped with transponders when operating in an ADIZ would expedite the identification process, thereby allowing the appropriate governmental entities to concentrate on those aircraft suspected of being involved in illegal drug transportation and conducting hazardous flight maneuvers while attempting to avoid detection and identification.

Additionally, aircraft altitude information can be displayed directly on a radar screen. Using this data, personnel conducting detection operations would be better able to conduct intercepts of suspect aircraft. Further, pilots of pursuit aircraft could use this information independently to narrow the field of a visual search. Even though the FAA believes that the use of transponders alone may enhance safety in the airspace of the ADIZ, the ability to determine the aircraft altitude through the use of Mode C will further increase the safety and effectiveness of the drug interdiction program, as well as reduce the number of false intercept missions now being flown by Customs. For these reasons, the FAA has modified the proposal as contained in Notice No. 86-1 to require automatic altitude reporting equipment in conjunction with the proposed transponder requirement.

Altitude Detecting Radar Systems

Two commenters suggested that the recently awarded contract to Westinghouse to replace 40 en route radars with new radar systems would effectively eliminate the need for aircraft under such radar surveillance to be equipped with a Mode C transponder. This commenter assumed that the altitude detecting function of such radar systems would accomplish the intentions of the proposals in Notice No. 88-17.

The new radar system addressed by the commenter is the ARSR-4 radar. This radar is designed for use by both the FAA and the Department of Defense (DOD). It is capable of determining and reporting target height to an accuracy of plus or minus 5,000 feet of true altitude, 90 percent of the time, as measured in any 5-nautical-mile range interval to a range of 175 nautical miles. However, air traffic controllers must provide aircraft vertical separation by 1,000 feet (or 2,000 feet above 29,000 feet above mean sea level). Therefore, data derived from the height detection function of the ARSR-4 cannot be used to effect such separation. Notwithstanding its height accuracy limitation, the FAA will use the other functions of the ARSR-4 for en route ATC. More importantly, the ARSR-type systems are not suitable for use at terminal radar approach control facilities. Until advancements in technology produce systems that accurately detect true altitude of aircraft with the necessary reliability for ATC separation, the FAA will depend on the altitude information derived from Mode C transponders which report altitude in 100-foot increments accurate to within 125 feet of the altitude displayed on the altimeter.

ATC Authorizations

The FAA specifically requested comments from operators of hot air balloons, fish spotter aircraft, petroleum industry helicopters, etc., and other persons interested in obtaining authorizations to deviate from the proposed transponder requirement and how information on such operations could be obtained by the FAA. No comments were received on this issue. However, in regard to hot air balloons and other aircraft such as sailplanes that are not equipped with an electrical system, the operators of such aircraft are excluded in this final rule from the Mode C transponder equipage requirement. Therefore, these operators will not have a need to seek approval to deviate from the requirement. However, in the case of petroleum-industry helicopter and other operators, the FAA has retained the general ATC authorization provisions contained in the proposal. Such an operator need only contact the ATC facility that exercises jurisdiction over the airspace and request an authorization. The FAA will grant such an authorization to the extent that aviation safety and drug interdiction activities are not adversely affected.

Adoption of the Rule

For the reasons stated above, the final rule is substantially adopted as proposed in Notice No. 88-17. The following is a discussion of the regulatory changes contained in this final rule.

ATC Transponder Requirement. Effective September 7, 1990, all aircraft except as otherwise authorized by ATC are required to have a transponder when operating into or out of the United States into, within, or across an ADIZ. Aircraft which were not originally certificated with an engine-driven electrical system or which have not subsequently been certified with such a system installed, balloons, and gliders are excluded from this requirement.

Transponder with Mode C Requirement. Effective December 30, 1990, all aircraft except as otherwise authorized by ATC are required to have a transponder with automatic pressure altitude reporting equipment when operating into or out of the United States into, within, or across an ADIZ. Aircraft which were not originally certificated with an engine-driven electrical system or which have not subsequently been certified with such a system installed, balloons, and gliders are excluded from this requirement.

Regulatory Evaluation Summary

This regulatory evaluation assesses the rule with respect to the potential benefits expected to accrue from implementation and the expected incremental costs of compliance. The FAA's estimation of the incremental cost of compliance with this rule assumes that only those aircraft which presently operate into the United States through an ADIZ which are not equipped with Mode C (or a basic transponder) will be affected.

The Aircraft Owners and Pilots Association (AOPA), on April 30, 1986, informed the FAA (Docket No. 24903), that the USCS, in 1984, estimated that 39,000 separate civil aircraft were processed about 160,000 times upon arrival in the United States. Of those, 28,678 were U.S.-registered aircraft. Informal contact with Customs Service personnel has verified that the number of processings has held steady at 161,000 in 1987.

The FAA estimated the proportion of the 28,678 U.S.-registered aircraft that might be affected by the amendment based on data contained in the FAA's December 1987 publication, "General Aviation Activity and Avionics Survey, Annual Summary Report 1986 Data." The FAA applied the percentages of transponder and Mode C-equipped aircraft in the active general aviation fleet to the number of U.S.-registered aircraft processed in 1984. See Appendix A of the full Regulatory Evaluation in the Docket for the detailed steps used to calculate these percentages.

Based on these data, an estimated 74.9 percent of active U.S. general aviation aircraft are transponder equipped. This percentage, applied to the 28,678 U.S.-registered aircraft, indicates that 7,198 of those U.S.-registered aircraft may not be so equipped. These figures indicate that 21,480 of arriving U.S.-

aircraft will become Mode C-equipped by the end of 1990 in conformity with the requirements of the recent FAA rule ("Transponder With Automatic Altitude Reporting Capability Requirement and Controlled Airspace Common Floor" (Mode C rule), 53 FR 23356, June 21, 1988).

Phase I of the above rule, commonly referred to as the Mode C rule, required by July 1, 1989, a transponder with Mode C for airplanes operating in the airspace at and above 10,000 feet MSL, and in the vicinity of TCA-primary airports. Phase II of the Mode C rule requires, by December 30, 1990, a transponder with Mode C for most operations in the vicinity of ARSA-primary airports and other designated airports.

Mode C for operators affected by this ADIZ rule is required by December 30, 1990. However, a basic transponder is required for these operators beginning 6 months from the date of publication of this rule. This rule imposes no cost impact on operators of those airplanes that presently are equipped with basic transponders (9,430) because they will conform fully with the Mode C requirements of this rule at the same time that they meet the requirements of Phase II of the Mode C rule on December 30, 1990. These operators' cost for Mode C was attributed previously to the Mode C rule.

Since the Mode C rule required Mode C by July 1, 1989, for operations in the vicinity of a TCA, and by December 30, 1990, for operations in the vicinity of an ARSA, some of these operators of airplanes that presently are without transponders (7,198) conform fully with the requirements of this ADIZ rule at the same time that they met the requirements of the Mode C rule pertaining to TCAs, effective July 1, 1989. The remaining operators of these 7,198 airplanes, who must meet only the December 30, 1990, date under the Mode C rule, but whom this ADIZ rule also affects, will have to acquire a basic transponder prior to December 30, 1990. At that juncture, when they conform with Phase II of the Mode C rule, they also will satisfy fully the Mode C requirement of this ADIZ rule.

To assure calculating the maximum cost attributable to this ADIZ rule, the FAA is making two assumptions. First, rather than speculate about how many of the 7,198 airplanes either have or will conform with the Mode C rule's effective dates for operating in TCAs (July 1, 1989) or ARSAs (December 30, 1990), the FAA assumes that at the time of this writing, this rule requires the operators of all 7,198 aircraft to install a basic transponder 6 months before they otherwise would under the Mode C rule's December 30, 1990, effective date for operating in ARSAs. Second, although this ADIZ rule requires only the basic transponder before December 30, 1990, operators might make a personal choice to equip with Mode C at the same time they install transponders. The FAA assumes that all of the operators of these 7,198 airplanes would install Mode C concurrently.

The maximum incremental cost of this rule to these 7,198 operators will be opportunity cost of interest on capital expended to purchase, install, and maintain Mode C transponders 6 months sooner than the Mode C rule requires. The principal expenditure for the purchase, installation, and first-year maintenance normally would be allocated to this rule, but it already has been attributed to meeting the requirements of the recently issued Mode C rule.

An average cost for a basic transponder and an average cost for Mode C or altitude encoding equipment was ascertained on the basis of information supplied by avionics manufacturers. The most popular basic transponder model (low end of the market) costs approximately \$1,050 installed.

Comparably priced Mode C avionics that are compatible with nearly all basic transponders used in general aviation aircraft range in cost from approximately \$800 to \$900 installed. While avionics costs vary widely, the FAA is using the low cost equipment to make cost estimates because this equipment, without additional features, meets the FAA's regulatory requirements.

The FAA estimates the cost of new Mode C equipment at \$1,900. This estimate is made using \$1,050 as the cost for the transponder plus \$850 to upgrade a transponder to Mode C. Additionally, maintenance is necessary to assure that the avionics are properly calibrated and in good functioning order. The cost to maintain and inspect the avionics biennially is estimated at 5 percent of \$1,900 or \$95.

This ADIZ rule imposes no cost to the operators of the 9,430 airplanes that already are transponder-equipped because they are allowed to operate into, within, or out of the ADIZ without Mode C until Phase II of the Mode C rule becomes effective on December 30, 1990. The total cost for a Mode C upgrade and maintenance is attributable to the requirements of the Mode C rule.

Although not attributable to this ADIZ rule, these costs are set out as follows in the interest of completeness. A cost of \$850 per unit for Mode C to upgrade these 9,430 aircraft equates to \$8,015,500. Additionally, biennial maintenance is necessary to assure that the avionics are properly calibrated and in good functioning order. The cost to maintain and inspect the avionics is estimated at 5 percent or \$400,775.

Benefits

The FAA expects that this rule will yield potential benefits of three types. Primarily, it will improve the operating efficiency of law enforcement efforts to sort legal flights from illegal smuggling operations. Second, it will improve the effectiveness of drug interdiction efforts. Third, it will enhance aviation safety by reducing the direct threat to air commerce caused by smugglers engaged in extremely dangerous flight techniques to avoid detection and apprehension.

Efficient Sorting Operations

Aircraft entering the United States through an ADIZ can be detected by means of various types of radar, pursuit aircraft, and advanced police techniques. When an aircraft operating to destinations inside the United States from outside is detected on radar, its position is correlated with known flight plan information and any previous position reports. An aircraft with an operating transponder and Mode C is identifiable more quickly and more positively than an aircraft without a transponder.

This final rule will enable drug enforcement personnel to improve significantly their ability to sort legal flights from illegal drug smuggling operations. Consequently, the USCS, as well as the United States Coast Guard (USCG), North American Air Defense Command (NORAD) and the Air National Guard (ANG), will reduce the number of unnecessary launches conducted in pursuit of suspect airplanes.

A reduction in unnecessary launches will generate a savings to the USCS, the USCG, NORAD, and the ANG in flight and personnel costs. The FAA has made estimates of these savings based on information obtained from the respective services. Because at the present time they cannot sort quickly enough certain legal flights which do not have transponders from illegal drug smuggling operations, the USCS launches approximately 225 flights per year to make such identifications of airplanes which turn out to be legal targets. In each instance if the airplane had a transponder, the launch could have been avoided.

Each launch utilizes an interceptor aircraft and an apprehension aircraft. A Citation with three personnel aboard is used to intercept. A Blackhawk with five personnel aboard is used for apprehension. The flight duration is 1 to 2 hours, with an estimated 50 percent of 2 hours duration and an average duration, of 1.5 hours for all flights. The 225 launches, each with 8 personnel for an average 1.5 hours per flight, amounts to 2,700 personnel hours spent. Based on the 1988 pay scale for GS-11, 12, and 13 personnel, the combined wages paid for these launches is \$42,686 per year. The cost per hour to operate and maintain a Citation or a Blackhawk is \$750. The cost to operate both aircraft on 225 flights for an average 1.5 hours per flight is \$506,250. The annual personnel costs (\$42,686) added to the incremental cost of operating and maintaining the aircraft (\$506,250), amounts to a combined annual cost of \$548,936 or, for a 15-year period, a present value of \$4,175,207 (the useful life of a transponder with Mode C).

A reduction in unnecessary launches similarly will generate a savings to the USCG. These savings are estimated based on information obtained from the USCG, which has launched a USCG HU-25 interceptor aircraft to identify a non-squawking (no IFF transponder) radar target at least once per day on average. The HU-25C costs approximately \$2,096 per hour to operate (including personnel costs), and the launches

The average cost per intercept is estimated at \$7,000, based on 1.2 hour sorties for two F-16 interceptors. Assuming a reduction of one launch per month in pursuit of suspect airplanes without operating transponders (one-third the average yearly number of launches in pursuit of unknown targets later identified as privately owned aircraft), the cost savings for 12 intercepts at \$7,000 per sortie is \$84,000, or for a 15-year period, a present value of \$638,904.

These estimates of savings the FAA expects will derive from this final rule do not include wear and tear to the airframe, lost opportunity, or the cost of maintaining more assets than are actually necessary under conditions of optimum sorting capability.

The transponder requirement will assist significantly in the sorting process and initially may result in an increased number of interdictions. In the long run, however, successful implementation of the air strategy will deter air narcotics traffickers and force them to attempt other modes and methods. While this will make them more susceptible to surface-based law enforcement efforts, there will be a lower rate of air seizure.

The FAA is unable to define in numerical terms the value to society of the achievements expected from the improved effectiveness of drug interdiction efforts that would result from implementing the final rule. Drug interdiction is only one aspect of a comprehensive system of law enforcement activity that is conducted in a synergistic fashion in the battle against illegal drug commerce and drug abuse in the United States. However, while quantifying these benefits on a monetary basis would be too speculative, the FAA is confident that the resulting benefit to society from enhanced drug interdiction will be significant and will exceed the costs of this rule.

Enhanced Aviation Safety

Improved identification of legitimate aircraft operations, and consequently the expeditious identification and apprehension of those conducting drug smuggling operations, will decrease the frequency of such illegal airborne activity. Fewer operators engaged in hazardous flight techniques to avoid detection and apprehension will enhance the margin of safety in that airspace for those operators conducting legitimate operations. Similarly, it will diminish the risk of injury to persons and property on the surface.

A review of the National Transportation Safety Board's data base for drug-related aviation accidents revealed that 127 fatalities and 33 serious injuries occurred between 1975 and 1984. In this timeframe, the statistics equate to an annual average of 13 fatalities and 3 serious injuries related to drug trafficking activity. The FAA expects that the final rule will have a positive impact on these rates, though the FAA is unable to estimate to what extent.

Moreover, collateral benefits to the National Airspace System will result from these requirements. Transponder and Mode C capability will become available for use elsewhere in the system once it is in place for use in an ADIZ. Additional aircraft equipped with Mode C transponders in specified airspace will provide controllers with a continuous, more complete ATC picture. In areas in which aircraft are provided with Mode C transponders and ATC clearances, this will allow altitude, distance and azimuth information to be correlated and issuance of the proper control instructions developed to assure that safe separation is maintained between participating and nonparticipating aircraft. In addition, the need to communicate via two-way radio is reduced. For example, controllers will not repeatedly have to ask pilots to report aircraft altitude; aircraft climb/descent paths can be observed independently for possible conflicts with other traffic; and unnecessary traffic advisories concerning noncontrolled aircraft are eliminated.

Further, existing automated radar tracking systems currently are programmed to predict continually and update the path of Mode C-equipped aircraft being tracked by the system. These predictions are constantly compared with those of controlled aircraft that are also tracked by the system. In addition, these systems compare the data with pre-programmed terrain information.

Sufficiently precise data are not available to describe the benefits of the incremental usage of transponders with Mode C in the system attributable solely to this rule. Consequently, the FAA cannot calculate a numerical value for this substantial general benefit.

Comparison of Benefits and Costs

Using (1) the AOPA estimate that 28,000 U.S.-registered aircraft were processed by the Customs Service upon arrival in the United States in 1984, and (2) the FAA's estimate that of those aircraft 9,430 will have to upgrade to Mode C and 7,198 will have to install a Mode C transponder to conform with the final rule; the FAA estimates that the only incremental cost of this rule is an opportunity cost of \$689,000 to the operators of the latter 7,198 affected airplanes. All other costs to these operators regarding requirements that conform with this rule are attributed to the recently adopted Mode C rule.

The USCS and the USCG will save, over the 15-year period, an estimated \$4.2 million and \$11.6 million respectively, through a reduction in unnecessary operations. NORAD and the ANG also will save \$639,000.

The potential benefits from increased aviation safety are not quantifiable in monetary terms nor are the benefits of enhanced drug interdiction efforts. These benefits would be obtained from:

- an unmeasurable diminution in the number of operators who use hazardous flight techniques to avoid detection and apprehension, thereby enhancing the margin of safety in that airspace for those operators conducting legitimate operations;

- an indeterminable positive impact on the rate of drug-related aviation accidents, which between 1975 and 1984, occurred with an average annual frequency of 13 fatalities and 3 serious injuries related to drug trafficking; and

- the unquantifiable incremental safety benefits to the National Airspace System from increased usage of Mode C transponders as a spillover phenomenon attributable solely to this final rule regarding entry into the United States through an ADIZ.

The total potential benefits expected from all categories of improvement attributable to the final rule are expressed in monetary terms as:

• Operating Efficiency for Customs Service	\$4.2 million
• Operating Efficiency for Coast Guard	11.6 million
• Operating Efficiency for NORAD and Air National Guard	0.6 million
Total Operating Efficiency (All Services)	16.4 million
• Effective Drug Interdiction Value to Society	unquantifiable
• Aviation Safety	unquantifiable
Total Benefits	16.4 million plus a substantial unquantifiable amount

The potential benefit (\$16.4 million, discounted) exceeds the maximum potential cost (\$689,000) by a factor greater than 24 times over the 15-year life of the equipment for this rule, even without inclusion of the unquantifiable safety benefits that would be expected to result. Further, it is obvious that the prevention of only one accident in which lives would be lost would, alone, more than pay for the cost of this rule. The FAA's opinion is that the data clearly indicate that the rule is justified on a benefit-to-cost basis.

Conclusion

For the reasons set forth above, the FAA has determined that this is not a major regulation as defined in Executive Order 12291. The FAA has further determined that this action is significant as defined in Department of Transportation Regulatory Policies and Procedures (44 FR 11034; February

The Regulatory Flexibility Act (RFA) of 1980 was enacted by Congress to ensure that small entities are not unnecessarily and disproportionately burdened by Government regulations. The RFA requires Government agencies to review rules which may have "a significant economic impact on a substantial number of small entities."

The FAA has adopted threshold values that define significant economic impact, and these values are stated in FAA Order 2100.14A. The threshold values for economic impact are adjusted for inflation and are expressed here in 1988 dollars. The size threshold value for small entity operators is a maximum number of nine aircraft owned or operated. The threshold value for a significant economic impact on an unscheduled operator is an annualized cost of \$4,000.

The opportunity cost to install the equipment and to maintain it is \$96 per airplane. The opportunity cost is based on equipping a small low performance small airplane 6 months sooner than is otherwise required by a previous rule (Transponder with Automatic Altitude Reporting Capability Requirement and Controlled Airspace Common Floor, 53 FR 23356, June 21, 1988). No small entity reaches the annualized cost impact threshold of \$4,000. The threshold value (\$4,000) exceeds the maximum annualized cost for an owner or operator of nine airplanes ($9 \times \$96 = \864). Therefore, this rule is not expected to have a significant economic impact on a substantial number of small entities who operate into, within, or out of an ADIZ.

Federalism Determination

The amendment set forth herein would not have substantial direct effects on the States, on the relationship between the National Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that such regulations do not have federalism implications warranting the preparation of a Federalism Assessment.

The Amendment

Accordingly, the FAA amends FAR Part 99 (14 CFR Part 99) effective April 6, 1990.

The authority citation for Part 99 continues to read:

Authority: 49 U.S.C. 1348, 1354(a), 1502, 1510, and 1522; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983).

Identification Zone (ADIZ), designated in Subpart B.

(b) Except for §§ 99.7 and 99.12, this subpart does not apply to the operation of any aircraft—

(1) Within the 48 contiguous States and the District of Columbia, or within the State of Alaska, on a flight which remains within 10 nautical miles of the point of departure;

(2) Operating at true airspeed of less than 180 knots in the Hawaii ADIZ or over any island, or within 3 nautical miles of the coastline of any island, in the Hawaii ADIZ;

(3) Operating at true airspeed of less than 180 knots in the Alaska ADIZ while the pilot maintains a continuous listening watch on the appropriate frequency; or

(4) Operating at true airspeed of less than 180 knots in the Guam ADIZ.

(c) Except as provided in § 99.7, the radio and position reporting requirements of this subpart do not apply to the operation of an aircraft within the 48 contiguous States and the District of Columbia, or within the State of Alaska, if that aircraft does not have two-way radio and is operated in accordance with a filed DVFR flight plan containing the time and point of ADIZ penetration and that aircraft departs within 5 minutes of the estimated departure time contained in the flight plan.

(d) An FAA ATC center may exempt the following operations from this subpart (except Section 99.7), on a local basis only, with the concurrence of the military commanders concerned:

(1) Aircraft operations that are conducted wholly within the boundaries of an ADIZ and are not currently significant to the air defense system.

§ 99.5 General.

(a) The Air Defense Identification Zone (ADIZ) is an area of airspace over land or water in which the ready identification, location, and control of civil aircraft is required in the interest of national security.

(b) Unless designated as an ADIZ, a Defense Area is any airspace of the United States in which the control of aircraft is required for reasons of national security.

(c) For the purposes of this part, a Defense Visual Flight Rules (DVFR) flight is a flight within an ADIZ conducted under the visual flight rules in part 91.

(Amdt. 99-5, Eff. 8/27/65); (Amdt. 99-13, Eff. 6/30/88)

§ 99.5 Emergency situations.

In an emergency that requires immediate decision and action for the safety of the flight, the pilot in command of an aircraft may deviate from the rules in this part to the extent required by that emergency. He shall report the reasons for the deviation to the communications facility where flight plans or position reports are normally filed (referred to in this part as “an appropriate aeronautical facility”) as soon as possible.

(Amdt. 99-13, Eff. 6/30/88)

§ 99.7 Special security instructions.

Each person operating an aircraft in an ADIZ or Defense Area shall, in addition to the applicable rules of this part, comply with special security instructions issued by the Administrator in the interest of national security and that are consistent

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has a functioning two-way radio.
(Amdt. 99-13, Eff. 6/30/88)

§ 99.11 ADIZ flight plan requirements.

(a) Unless otherwise authorized by ATC, no person may operate an aircraft into, within, or across an ADIZ unless that person has filed a flight plan with an appropriate aeronautical facility.

(b) Unless ATC authorizes an abbreviated flight plan—

(1) A flight plan for IFR flight must contain the information specified in § 91.169; and

(2) A flight plan for VFR flight must contain the information specified in § 91.153(a) (1) through (6).

(3) If airport of departure is within the Alaskan ADIZ and there is no facility for filing a flight plan then:

(i) Immediately after takeoff or when within range of an appropriate aeronautical facility, comply with provisions of paragraph (b)(1) or (b)(2) as appropriate.

(ii) Proceed according to the instructions issued by the appropriate aeronautical facility.

(c) The pilot shall designate a flight plan for VFR flight as a DVFR flight plan.

(Amdt. 99-12, Eff. 4/22/82); (Amdt. 99-13, Eff. 6/30/88); (Amdt. 99-14, Eff. 12/12/88); (Amdt. 99-15, Eff. 8/18/90)

§ 99.12 Transponder-on requirements.

(a) *Aircraft transponder-on operation.* Each person operating an aircraft into or out of the United States into, within, or across an ADIZ designated in subpart B of this part, if that aircraft is equipped with an operable radar beacon transponder, shall operate the transponder, including altitude encoding equipment if installed, and shall reply on the appropriate code or as assigned by ATC.

(b) *ATC transponder equipment and use.* Effective September 7, 1990, unless otherwise authorized by ATC, no person may operate a civil aircraft into or out of the United States into, within, or

radar beacon transponder and automatic pressure altitude reporting equipment having altitude reporting capability that automatically replies to interrogations by transmitting pressure altitude information in 100-foot increments.

(d) Paragraphs (b) and (c) of this section do not apply to the operation of an aircraft which was not originally certificated with an engine-driven electrical system and which has not subsequently been certified with such a system installed, a balloon, or a glider.

(Amdt. 99-14, Eff. 12/12/88); (Amdt. 99-16, Eff. 4/6/90)

§ 99.15 Arrival or completion notice.

The pilot in command of an aircraft for which a flight plan has been filed shall file an arrival or completion notice with an appropriate aeronautical facility, unless the flight plan states that no notice will be filed.

(Amdt. 99-13, Eff. 6/30/88)

§ 99.17 Position reports; aircraft operating in or penetrating an ADIZ; IFR.

The pilot of an aircraft operating in or penetrating an ADIZ under IFR—

(a) In controlled airspace, shall make the position reports required in § 91.183; and

(b) In uncontrolled airspace, shall make the position reports required in § 99.19.

(Amdt. 99-13, Eff. 6/30/88); (Amdt. 99-15, Eff. 6/18/90)

§ 99.19 Position reports; aircraft operating in or penetrating an ADIZ; DVFR.

No pilot may operate an aircraft penetrating an ADIZ under DVFR unless—

(a) That pilot reports to an appropriate aeronautical facility before penetration: The time, position, and altitude at which the aircraft passed the last reporting point before penetration and the estimated

his complying with paragraphs (a) or (b) of this section, that pilot has reported immediately after taking off: the time of departure, altitude, and estimated time of arrival over the first reporting point along the flight route.

(Amdt. 99-13, Eff. 6/30/88)

§ 99.21 Position reports; aircraft entering the United States through an ADIZ; United States aircraft.

The pilot of an aircraft entering the United States through an ADIZ shall make the reports required in §§ 99.17 or 99.19 to an appropriate aeronautical facility.

(Amdt. 99-13, Eff. 6/30/88)

§ 99.23 Position reports; aircraft entering the United States through an ADIZ; foreign aircraft.

In addition to such other reports as ATC may require, no pilot in command of a foreign civil aircraft may enter the U.S. through an ADIZ unless that pilot makes the reports required in §§ 99.17 or 99.19 or reports the position of the aircraft when it is not less than one hour and not more than 2 hours average direct cruising distance from the United States.

flight plan when operating an aircraft in uncontrolled airspace unless that pilot notifies an appropriate aeronautical facility before deviating.

(c) No pilot may deviate from the filed DVFR flight plan unless that pilot notifies an appropriate aeronautical facility before deviating.

(Amdt. 99-13, Eff. 6/30/88); (Amdt. 99-15, Eff. 8/18/90)

§ 99.29 Radio failure; DVFR.

If the pilot operating an aircraft under DVFR in an ADIZ cannot maintain two-way radio communications, the pilot may proceed in accordance with original DVFR flight plan or land as soon as practicable. The pilot shall report the radio failure to an appropriate aeronautical facility as soon as possible.

(Amdt. 99-13, Eff. 6/30/88)

§ 99.31 Radio failure; IFR.

If a pilot operating an aircraft under IFR in an ADIZ cannot maintain two-way radio communications, the pilot shall proceed in accordance with § 91.185 of this chapter.

(Amdt. 99-13, Eff. 6/30/88); (Amdt. 99-15, Eff. 8/18/90)

§ 99.42 Contiguous U.S. ADIZ.

(a) The area bounded by a line from 26°00'N, 96°35'W; 26°00'N, 95°00'W; 26°30'N, 95°00'W; then along 26°30'N to 26°30'N, 84°00'W; 24°00'N, 83°00'W; 24°00'N, 80°00'W; 24°00'N, 79°25'W; 25°40'N, 79°25'W; 27°30'N, 78°50'W; 30°45'N, 74°00'W; 39°30'N, 63°45'W; 43°00'N, 65°48'W; 41°15'N, 69°30'W; 40°32'N, 72°15'W; 39°55'N, 73°00'W; 39°38'N, 73°00'W; 39°36'30"N, 73°40'30"W; 39°30'N, 73°45'W; 37°00'N, 75°30'W; 36°10'N, 75°10'W; 35°10'N, 75°10'W; 32°01'N, 80°32'W; 30°50'N, 80°54'W; 30°05'N, 81°07'W; 27°59'N, 79°23'W; 24°49'N, 80°00'W; 24°49'N, 80°55'W; 25°10'N, 81°12'W; then along a line 3 nautical miles from the shoreline to 25°45'N, 81°27'W; 25°45'N, 82°07'W; 28°55'N, 83°30'W; 29°20'N, 85°00'W; 30°00'N, 86°00'W; 30°00'N, 88°30'W; 29°00'N, 89°00'W; 28°45'N, 90°00'W; 29°26'N, 94°00'W; 28°42'N, 95°17'W; 28°05'N, 96°30'W; 26°25'N, 96°30'W; 26°00'N, 96°35'W; 25°58'N, to 97°07'W;

(b) The area bounded by a line from 32°32'03"N, 117°07'25"W; 32°30'N, 117°20'W; 32°00'N, 118°24'W; 30°45'N, 120°50'W; 29°00'N, 124°00'W; 37°42'N, 130°40'W; 48°20'N, 132°00'W; 48°20'N, 128°00'W; 48°30'N, 125°00'W; 48°29'38"N, 124°43'35"W; 48°00'N, 125°15'W; 46°15'N, 124°30'W; 43°00'N, 124°40'W; 40°00'N, 124°35'W; 38°50'N, 124°00'W; 34°50'N, 121°10'W; 34°00'N, 120°30'W; 32°00'N, 118°24'W; 32°30'N, 117°20'W; 32°32'03"N, to 117°07'25"W; and

(c) A line extending from 32°32'03"N, 117°07'25"W; eastward along the United States-Mexico Border to 25°58'00"N, 97°07'00"W."

(Amdt. 99-13, Eff. 6/30/88)

along 163°00'W to 54°00'N, 163°00'W; 56°30'N, 154°00'W; 59°20'N, 146°00'W; 59°30'N, 140°00'W; 57°00'N, 136°00'W; 54°35'N, 133°00'W; to point of beginning.

(Amdt. 99-1, Eff. 7/1/64); (Amdt. 99-11, Eff. 10/21/81); (Amdt. 99-13, Eff. 6/30/88)

§ 99.45 Guam ADIZ.

(a) *Inner boundary.* From a point 13°52'07"N, 143°59'16"E, counterclockwise along the 50-nautical-mile radius arc of the NIMITZ VORTAC (located at 13°27'11"N, 144°43'51"E); to a point 13°02'08"N, 145°28'17"E; then to a point 14°49'07"N, 146°13'58"E; counterclockwise along the 35-nautical-mile radius arc of the SAIPAN NDB (located at 15°06'46"N, 145°42'42"E); to a point 15°24'21"N, 145°11'21"E; then to the point of origin.

(b) *Outer boundary.* The area bounded by a circle with a radius of 250 NM centered at latitude 13°32'41"N, longitude 144°50'30"E.

(Amdt. 99-7, Eff. 7/25/68); (Amdt. 99-8, Eff. 3/6/69); (Amdt. 99-9, Eff. 3/10/70); (Amdt. 99-10, Eff. 3/11/76); (Amdt. 99-13, Eff. 6/30/88)

§ 99.47 Hawaii ADIZ.

(a) *Outer boundary.* The area included in the irregular octagonal figure formed by a line connecting 26°30'N, 156°00'W; 26°30'N, 161°00'W; 24°00'N, 164°00'W; 20°00'N, 164°00'W; 17°00'N, 160°00'W; 17°00'N, 156°00'W; 20°00'N, 153°00'W; 22°00'N, 153°00'W; to point of beginning.

(b) *Inner boundary.* The inner boundary to follow a line connecting 22°30'N, 157°00'W; 22°30'N,

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